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The Indiana University School of Business Division of Research

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Morton J. Marcus **Where Are You From? / 2**

Indiana's Business

INDIANA BUSINESS REVIEW

Published eleven times yearly (January and February issues are combined) by the Division of Research, Graduate School of Business, Indiana University.

Schuyler F. Otteson, Dean
H.D. David, Administrative Director
Morton J. Marcus, Editor

Larry W. Smith, Editorial Assistant; C. Lowell McCoskey, Systems and Programming Manager; Irene Doris, Production; Jerry Vest, Brian Burden, Mike Flood, and Art Klipsch, Research Assistants; Vicki Blackwell, Compositor; Richard Brandt, Computer Graphics.

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WHERE ARE YOU FROM?

Nearly 45 percent of the people of Indiana in 1980 had moved since 1975. While nearly 2.8 million Hoosiers were living in the same residence in 1980 that they occupied in 1975, another 2.3 million had found new homes. These are findings of the 1980 Census of Population.

Of the 2.3 million movers nearly 1.4 million (62 percent) stayed in the same county. Taken together, these intra-county movers and the people who lived in the same house accounted for nearly 4.2 million (82 percent) of Hoosiers five years of age or older in 1980. Only eighteen of every hundred Hoosiers were people who had moved across county lines.

Among the movers who crossed county lines, the majority (54 percent) were people changing residence within the state. In sum, 4,658,000 (92 percent) of the people of Indiana in 1980 age five and older were also living in Indiana in 1975. In 1980, fewer than one in every eleven Hoosiers was a newcomer to the state. Total in-migration from elsewhere was 415,859, of whom 31,652 (7.6 percent) lived abroad in 1975. (NOTE: Those living outside the U.S. in 1975 included citizens of this country in the military as well as persons working abroad; foreign immigrants in this number has yet to be determined.)

The North Central states (including neighboring Illinois, Michigan, and Ohio) sent 178,730 citizens to Indiana, or 46.5 percent of those coming to Indiana from other states of the nation. The Southern states (including neighboring Kentucky) sent 123,765 (32.2 percent of the interstate movers). The balance, fewer than 82,000 persons, came about equally from the Northeastern states and the Western states. See Table 1.

Morton J. Marcus

U.S. MAN-HOURS IN INDUSTRIAL PRODUCTION
(Seasonally Adjusted Data)

	United States				*Indiana*		
	Latest Month (millions)	*Percent Change From* One Month Ago	One Year Ago	*Latest Month* (thousands)	*Percent Change From* One Month Ago	One Year Ago
Manufacturing	Aug. 735.8	0.6	−9.9	July 23,037.7	−0.8	−11.9
Food	Aug. 69.5	2.3	−1.5	July 1,490.6	0.1	−4.4
Apparel and textiles	Aug. 64.7	0.1	−12.2	July 420.7	4.2	−1.7
Lumber and wood	Aug. 23.0	−3.3	−14.4	July 642.5	2.6	−12.4
Furniture	Aug. 16.5	1.4	−8.5	July 646.2	−2.2	−15.6
Paper	Aug. 26.4	−2.9	−7.1	July 546.3	3.4	−1.9
Printing	Aug. 45.1	−2.4	−6.0	July 1,133.0	3.9	−2.1
Chemicals	Aug. 43.9	−4.6	−5.9	July 1,346.4	2.6	3.0
Petroleum and products	Aug. 9.3	1.3	−1.5	July 197.9	6.0	1.4
Rubber and plastics	Aug. 27.5	0.8	−8.8	July 1,215.2	0.5	−5.4
Stone, clay and glass	Aug. 24.1	0.5	−9.9	July 811.3	−4.4	−5.9
Primary metals	Aug. 34.3	−1.8	−24.7	July 3,296.3	−4.2	−20.3
Fabricated metals	Aug. 55.6	0.2	−10.4	July 1,858.9	−1.9	−9.1
Nonelectrical machinery	Aug. 83.9	−0.8	−14.5	July 2,457.0	−0.2	−15.8
Electrical machinery	Aug. 79.4	−2.3	−7.0	July 3,727.0	0.6	−15.5
Transport equipment	Aug. 68.5	−6.4	−6.7	July 2,913.9	−3.5	−16.4

Table 1

INDIANA POPULATION BY PLACE OF RESIDENCE 5 YEARS EARLIER

	Number of Persons (000's)	*Pct.*
Tot. population 5 yrs. old or over	5,074	100.0
Residence 5 yrs. earlier same house	2,778	54.75
Different house (U.S.)	2,264	44.62
same county	1,394	27.48
Different county	869	17.14
same state	485	9.57
Different state	384	7.57
Northeastern U.S.	41	.81
North Central U.S.	179	3.52
Southern U.S.	124	2.44
Western U.S.	40	.80
Abroad	32	.62

CENSUS DATA WORKSHOP

The Indiana State Data Center is sponsoring a "Census Basics" Workshop on December 16, 1982. It will be held at the IU Business School in Indianapolis from 9:00 a.m. to 4:00 p.m. The workshop will be conducted by an Information Specialist from the Bureau of the Census and staff of the Indiana State Data Center. The program will include hands-on experience in developing a neighborhood profile, an update on 1980 census products, and census geography. To register for this workshop, contact the Indiana State Data Center, Indiana State Library, 140 N. Senate, Indianapolis, IN 46204. There is no charge for the workshop, but pre-registration is requested due to limited space and the nature of the workshop.

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally Adjusted in Millions of Kilowatt Hours)

	August 1982	*July 1982*	*August 1981*	*Percent Change From One Month Ago*	*Percent Change From One Year Ago*
Anderson	22.9	20.1	22.7	12.2	8.7
Bedford	12.1	13.6	15.5	−12.4	−2.8
Bloomington	4.7	4.8	3.4	−2.1	27.6
Columbus	17.1	16.1	21.8	5.8	−27.5
Connersville	8.2	7.8	8.4	4.9	−2.4
Crawfordsville	11.4	10.9	10.3	4.4	9.6
East Chicago	19.9	17.7	25.5	11.1	28.1
Elkhart	22.3	21.0	23.0	5.8	−3.1
Evansville	46.5	46.2	46.4	0.6	0
Fort Wayne	43.8	39.0	49.0	11.0	−12.0
Frankfort	9.6	7.8	9.3	18.7	3.1
Gary	128.1	126.4	174.7	1.3	−36.4
Goshen	10.0	8.1	10.1	19.0	−1.0
Hammond	64.8	58.3	60.8	10.0	6.2
Huntington	5.3	5.1	6.0	3.8	−3.3
Indianapolis	365.3	377.2	378.2	−3.3	−3.5
Jeffersonville	4.9	5.2	6.8	−6.1	−38.8
Kokomo	68.4	70.4	74.0	−2.9	−8.2
Lafayette	37.3	40.3	42.6	−8.0	−8.0
LaPorte	13.7	13.4	16.0	2.2	−16.8
Logansport	7.5	8.7	9.6	−16.0	−28.0
Madison	2.3	2.4	2.5	−4.3	−8.7
Marion	31.7	31.2	30.1	1.6	5.0
Michigan City	46.7	44.0	50.8	5.8	−8.8
Mishawaka	4.9	4.1	NR*	16.3	NR*
Muncie	14.2	13.0	15.5	8.5	−9.2
New Albany	5.2	4.8	5.7	7.7	−9.6
New Castle	8.3	8.2	9.4	1.2	−13.3
Peru	5.9	4.8	5.7	18.6	3.4
Richmond	26.7	23.5	26.6	12.0	0
Seymour	2.2	2.4	2.7	−9.1	−22.7
South Bend	27.5	26.3	24.5	−9.6	10.9
Terre Haute	26.1	25.8	31.6	1.1	−21.1
Valparaiso	9.9	8.8	9.7	11.1	2.0
Vincennes	2.6	3.0	3.3	−15.4	−26.9
Wabash	6.5	6.2	8.3	4.6	−27.7
Indiana	**1,797.4**	**1,787.8**	**1,928.5**	**0**	**−7.3**

*Not reported.
SOURCES: Data provided monthly by public and municipal electric companies.

UNITED STATES–INDIANA BUSINESS INDICATORS*
(Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100)

		United States				Indiana		
		Latest Month	*Previous Month*	*One Year Ago*		*Latest Month*	*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	Aug.	136.0	136.3	138.8	Aug.	112.6	112.5	118.8
Manufacturing employment	Aug.	96.3	96.9	104.4	Aug.	82.7	83.4	93.3
Average weekly hours (No.)+	Aug.	39.0	39.0	39.9	Aug.	39.2	39.4	40.4
Average weekly earnings ($)+	Aug.	331.89	333.45	320.40	Aug.	384.16	387.30	380.57
Nonmanufacturing employment	Aug.	152.4	152.5	153.1	Aug.	132.4	132.9	135.6
Unemployment rate (%)	Aug.	9.8	9.8	7.3	Aug.	11.3	11.1	9.3
Unemployment-married males (%)	Aug.	6.7	6.6	4.0	–	–	–	–
Continued unemployment claims	–	–	–	–	Aug.	456.4	467.6	531.5
PRODUCTION								
Bituminous coal production	July	143.7	143.1	174.1	–	–	–	–
Industrial electricity production	May	131.2	133.3	149.5	–	–	–	–
Industrial electricity sales	–	–	–	–	Aug.	153.2	154.0	164.1
Manufacturing production	Aug.	137.2	137.9	153.2	Aug.	137.1	138.1	151.7
Raw steel production	Aug.	54.8	56.2	99.9	Aug.	92.9	98.4	139.4
CONSTRUCTION								
Construction activity-Total	July	291.5	293.6	303.7	Aug.	202.4	197.6	198.0
Residential housing starts	Aug.	78.0	93.0	73.6	Aug.	67.3	57.1	63.0
Residential expenditures	July	302.1	297.0	342.9	Aug.	192.1	184.0	220.1
Nonresidential expenditures	July	291.5	297.2	290.0	Aug.	177.6	174.3	210.9
Public expenditures	July	190.2	189.8	199.5	–	–	–	–
Public works and utilities	–	–	–	–	Aug.	256.0	243.3	139.2
OTHER INDICATORS								
Personal income per capita ($)	July	11,164.1	11,062.1	10,591.3	82:1	9,887.0	9,839.0	9,484.0
Passenger car sales (Thousands)+	Aug.	609.0	630.0	801.0	July	12.1	13.2	15.6
Year to date (Thousands)	Aug.	5,278.0	4,669.0	6,092.0	July	88.1	76.0	113.0

*Current indicators are preliminary and subject to revision.
+Not seasonally adjusted.
SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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The National Economic Outlook for 1983

In this issue ▪ ▪ ▪

The annual forecast of the economy is always a risky venture. Last year in these pages a cautious expectation of improvement was offered. We were disappointed by the actuality of this year. The inflation and interest rate forecast was on target, but unemployment and general business conditions did not respond as expected.

This year a similar forecast is offered. We hope that the results are more satisfactory.

It was our intent to offer the national and state forecasts in the November issue and the local statements in December. Delays and cost considerations have sent us back to a combined format and a single issue for November/December. No doubt some will write asking where the missing issue is to be found. Others will rejoice in this larger-size issue coming at the end of the year.

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EUGENE A. BRADY

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As 1983 begins, the U.S. economy is still in the worst slump of the postwar period. The current recession, which many believe began in July 1981, is still with us after a year and a half. Some economists have argued that the current recession actually began in early 1980, and that the very short second quarter of 1980 recession was the beginning of the current slump. This would make the duration of the current recession equal to two and three-quarter years, considerably longer than the 1974-75 recession.

PROSPECTS FOR ECONOMIC RECOVERY

A major question in everyone's mind is: "When will the U.S. economy turn around, and how strong will the recovery be?" The Indiana University Business Outlook Panel has been grappling with this and other related questions. There has never been a postwar economic recovery which hasn't been led by an increase in consumer spending, particularly for automobiles and housing, and there is little evidence so far of any upturn. As of the end of the third quarter of 1982, price-adjusted Gross National Product and real final sales were slightly lower than they were three years earlier. Industrial production was even softer, remaining at about the same level of real output that it had achieved five years earlier. This recession appears to be a "banana-shaped" trough, rather than the "V-shaped" trough that was typical of most of the previous postwar recessions. At the present time we are moving sideways, with real growth in the third and fourth quarters of 1982 around zero. The most recent unemployment statistics show 10.4 percent unemployment for October (13.0 percent if discouraged workers are considered unemployed), and this has had an inhibiting effect on consumer spending. The savings rate has risen somewhat, to 7.5 percent currently from the 6.4 percent recorded in 1981 and the 5.8 percent of income saved in 1980. However, households can't save their incomes and spend it at the same time, so that the proportion of income currently being spent on consumption goods is relatively low. Retailers, looking for indicators, found Halloween candy sales off considerably. This was probably in large measure due to the Tylenol scare, but they didn't expect a surge of spending at Christmas either.

We probably have turned the corner, or will turn the corner in early 1983. It is difficult to pinpoint the exact timing of the recovery, since the trough is so flat this time. However, the recovery will be much less robust than the typical postwar recession reversal. The typical recovery had real output growing at a rate of 6 to 8 percent over the first three or four quarters of upturn. In contrast, this recovery will be considerably less strong, in the neighborhood of 3 to 3½ percent. Why will this recovery be so flat? We can think of five major reasons:

1. This is the longest postwar recession in history and consumers are running scared. The rising savings rate may reflect increased holdings of contingency balances as workers see their neighbors without work. Even though interest rates have softened considerably in recent months, the outlook is for still further decreases in rates, so that many households are continuing to postpone spending plans until they can be financed at still lower rates.

2. Both financial and nonfinancial firms have very tough-looking balance sheets. Most of the adverse financial effects of the recent disinflation are past, but at the present time 42 percent of corporate debt is short-term, and it is awkward, to say the least, to finance long-term projects with 30, 60, and 90 day paper. Financial institutions also are in the soup. Savings and loan associations continue to de-capitalize, and many commercial banks are worried about their energy-related and Third World loans, which are in danger of default.

3. The Federal budget deficit will remain in the $150-180 billion range over the next few years, so that government dissaving will almost offset the positive savings of the household sector. The Federal Government will continue to soak up a major portion of the savings of the private sector. If the recovery is more than anemic, there will be a "crowding out" of the private sector from the capital markets by government, keeping the real (inflation-adjusted) rate of interest high and discouraging capital formation.

4. The recent surge of the stock market partially reflected the view that the Federal Reserve had reversed its tight money policies and allowed the money supply to grow in excess of its earlier target of 5.5 percent for the narrowly defined money supply, M1, and that the softness of the economy overrode the Fed's concern with getting the inflation rate down. This ease appears to have been reflected in the recent softening in interest rates. We don't believe that this is correct. In our opinion, the softness in interest rates reflects declining demand for funds, rather than increases in supply. M1 grew only 2.5 percent between January and August of 1982, so that its recent surge puts its year-long growth rate only slightly above the Fed's target rate. Furthermore, the recent surge in the growth of M1 reflects technical factors which won't last very long. In October, some $35 billion of all-savers certificates came due. Since these certificates will be eliminated in 1983, the sixty-four dollar question is: "Where are they going?" One thing we know for sure is that they will come out of M2 (the more broadly defined money supply measure) and go into M1 until people figure out where to place these funds. The minute they decide, the funds will leave M1 and go elsewhere, so that M1 growth will reverse itself late this year or early next year. In our opinion, the Federal Reserve will stick to its guns and remain on course with regard to its 1983 money supply targets. If you believe, as we do, that changes in money supply growth lead to changes in real economic activity a year or so down the road, then the slow growth of M1 between January and August of 1982 will lead to slow growth in early 1983.

5. Finally, and importantly, fiscal policy is operating in a backward sense from what has been viewed as Keynesian orthodoxy. Rather than increasing government spending and/or cutting taxes to provide a countercyclic boost to the economy in recession (as we have done during most of the postwar troughs), we are doing the exact opposite. We are at or near the trough of the longest recession in postwar history and Congress and the Administration are advocating cuts in government spending and increases in taxes. Keynes would roll over in his grave if he had any idea of the fiscal response to the current recession.

We have forecasted a slow recovery. Where will it come from? One of the bright spots in 1983 should be residential housing. Housing starts have limped along at about a million per year over the past three years. With the recent softening of both long-term and short-term interest rates, we expect housing starts to run between 1.25 and 1.3 million units during calendar 1983. This is nowhere near the 2.3 million starts we had in 1973, but it represents a substantial improvement over 1982. Nonresidential construction does not look so good. There are serious gluts of office space in many areas of the country, and nonresidential construction plans, as viewed by anticipation data, are of a price-adjusted 5 percent from spending during 1982. With manufacturing plants running at less than 70 percent of capacity, there will be little demand for new plant and equipment until increases in consumer spending lead firms to believe it is reasonable to increase capacity.

What other areas might trigger the recovery? Certainly not agriculture, where real farm income is nearly 50 percent lower than it was in 1974. With the almost certain prospects of record harvests of feed grains this fall, farm income will continue to erode, due to the inelastic demand for farm products. Automobile demand, although improving, remains weak, and is down nearly 10 percent from a year ago and down a whopping third from average sales in 1976. The Federal Government will not contribute much to growth next year, since there is extreme pressure on Congress and the Administration to reduce spending. There will be some increased spending in the area of defense, and probably some new funds allocated to employment-creating activities, but nothing that will provide a strong impetus to growth. State and local governments remain financially strapped (with Indiana a typical case in point) and will either have to raise taxes or cut real spending in 1983, so that state and local government spending will decline slightly in real terms. Inventories have risen each month since May of 1982, and as of September ran to $515.3 billion. These increases suggest that inventories will have to be cut in the fourth quarter of 1982 and the first quarter of 1983. These inventory increases, although not of the magnitude of those that precipitated the 1974-75 recession, suggest that lackluster sales are causing firms to keep production at current rates or even below these levels. There will be no substantial inventory building to add to production in 1983.

Possibly the most optimistic part of the outlook for real activity next year is that the recovery will be a "prudent" one, setting the stage for a period of sustained economic growth that will continue for quite a few years in the future.

INFLATION

One other piece of good news for 1983 is from the inflation front. The basic inflation rate next year (excluding food and energy prices) will run between 5 and 6 percent. The softness in the economy has moderated wage demands considerably, and the effects on the inflation rate will begin to show up early in the year. It is difficult to predict food and energy prices, since they depend on the whims of Mother Nature and OPEC, respectively. However, current agricultural data and the worldwide recession appear to indicate that the prices of agricultural products and petroleum

products will remain soft throughout 1983, and are likely to rise less than the basic inflation rate. In that case, it is possible that inflation will be brought down to less than 5 percent.

EMPLOYMENT

Unemployment is going to remain high throughout the year. Double digit rates are likely to remain with us until mid-1983, when the tax cut and increased consumption spending will begin to bring the unemployment rate down. Unemployment, however, generally lags the cycle of overall economic activity, and even if the economy begins to pick up steam in the second half of 1983, the unemployment rate will not fall much below 9 percent. However, the unemployment rate is only one measure of the employment situation. The labor force participation rate is as high as it has been in at least the last six or seven years. So far in 1982, nearly 65 percent of the population over age 16 that was not in jail or in mental institutions was working, well above the 62 percent rate for 1976. The U.S. has had a tremendous growth in its labor force over the last nine years. Between 1974 and 1982 the labor force grew by over 20 percent, from 91 million workers in 1974 to 110 million in 1982, a gain of 19 million workers. Employing this many new workers without more unemployment than has existed has been a real accomplishment of the U.S. economy. That is not to say that the employment outlook is good, since it is not. But, it could have been worse. The good news from the employment front is that the labor force growth during the next ten years is only going to be half as much as the labor force grew during the last ten years. This has important implications for the future. Because the average age of workers will be rising each year as we move to the year 2000, we will have a slower growing, older, better educated labor force. We are also likely to see labor shortages five to ten years in the future. This will lead to labor saving production methods that will increase the productivity of labor and allow higher real wages without an inflationary impact.

INTEREST RATES

Interest rates are expected to continue their current decline until early spring. As this outlook goes to press, the prime rate (the base rate on corporate loans at large U.S. commercial banks) stands at 11.5 to 12 percent, the federal funds rate (funds traded as reserves between banks) is running at the 9.5 percent range, and the discount rate is 9.0 percent. In our opinion, all of these rates will continue to soften, with a prime rate of 9 to 10 percent expected between now and next summer. The long-term rate of interest will also decline, but not by as much, as the yield curve returns to its "ordinary" positive slope. Mortgage rates will decline from their 14-plus percent rate at the present time to the 12 to 12.5 percent range, with the positive impact on housing noted earlier.

The real rate of interest, as opposed to the money rates of interest discussed above, will probably run in the neighborhood of 5 percent. Viewed historically, the real rate of interest in the first half of the 20th century was in the range of 2.5 to 3.5 percent. That is, the money rate of interest on mortgages and bonds exceeded the rate of inflation by about 3 percent. When the inflation rate was 4 percent, bond rates ran about 7 percent, and when inflation rose to 6 percent, bond rates increased to 9 percent, etc. The 1970s were peculiar in this respect, since the rate of inflation exceeded long-term interest rates over most of the decade, making the real rate of interest negative. It turned positive with a vengeance, however, in the early 1980s. It was not too long ago—the first half of this year—that we had inflation of less than 5 percent together with corporate bond rates of 15 percent, which amounts to a whopping real rate of 10 percent. The real rate has come down recently, however, with an extreme softening of money interest rates, and the real rate should be in the neighborhood of 5 percent throughout 1983. It will remain higher than the "historical" 3 percent due to the influence of the $150-plus billion deficits that are anticipated in the budget of the Federal Government. This is still another reason why the recovery will be slower than normal.

FORECAST SUMMARY AND RISKS

In summary, the forecast is for 3 to 3.5 percent real growth in 1983, with an inflation rate in the neighborhood of 5 percent, and with unemployment remaining at double-digit levels throughout the first half of the year and declining to between 8.75 and 9 percent by year-end. The assumptions underlying this outlook include a continued effort the Federal Reserve to keep the growth rate of M1 and M2 within target levels, and a fiscal Federal Government deficit of $140 to $150 billion.

There is some chance that this outlook will prove to be wrong, and a final caveat is in order. There are three possibilities that will change the outlook, one which will make the outlook too pessimistic and two that will imply overoptimism. Consider them in order.

First, there is a chance that interest rates may fall more sharply than we expect them to, and that consumption spending could rebound much faster than we anticipate. In this case, real growth could take place in its traditional post-trough fashion and move up in the neighborhood of 6 to 7 percent during 1983. We believe this is unlikely, but possible.

Second, there is the possibility of "fiscal overkill" that will cause the recession to continue throughout 1983. It was argued earlier that this is the first trough in postwar history in which fiscal policy was not used in a countercyclic compensatory fashion, with increases in government spending and/or tax cuts to offset the low level of activity in the private sector. In addition, the Federal Reserve in the past has stimulated the economy in recession by Keynesian policies of money supply control that have led to lower nominal interest

rates. Neither of these sets of policies will be set in place next year, since Congress and the Administration are trying to cut government expenditures and raise taxes, while the Fed promises to maintain its money growth targets. The $150 billion annual federal deficits are unique to this recession, and the policy actions that will be taken next year could lead to a continued recession that could properly be labeled a depression.

The third possibility is less likely but more frightening. The financial problems of Third World countries have been widely publicized, and the problems of Mexico, Argentina, Bolivia, Poland, et al. have led to considerable exposure by U.S. banks. At the present time, developing economies are in debt to the tune of some $630 billion, with more than a slight possibility that these debts will have to be rolled over, extended, or defaulted. The current recession is worldwide, which has caused a decline in the demand for the exports of Third World countries as well as considerably lower prices for internationally traded commodities such as copper, tin, and zinc. In addition, high U.S. interest rates have increased the carrying costs of the existing debts of these countries. The combination of these two factors has forced the currencies of Third World nations to soften considerably against the U.S. dollar. Since most of their external debts are in dollars, they must come up with increasingly larger amounts of their local currencies to pay off a given dollar debt. Bolivia provides a good example. In March of 1982 there were 24 Bolivian pesos to the dollar. By September of 1982 the exchange rate had shifted to 250 pesos to the dollar, which means that the Bolivian government has to generate more than ten times as much domestic currency in September than it did in March to pay off a given dollar of external debt. There is some possibility that these debts will be defaulted, and the international financial crisis that would result in case of a domino-like series of defaults would drive up interest rates sharply. Some of the larger U.S. banks have considerable exposure in Third World loans, and an international liquidity crisis would trigger a domestic financial crisis that could prolong the recession.

The U.S. is more dependent on foreign trade than many think. One job in six, and one dollar of every three dollars earned by U.S. corporations comes from exports. World trade declined in real terms by 0.2 percent in 1982, the first decline since 1975. Measures for protectionism are currently being discussed by many countries, and many analysts feel that a return to worldwide high tariff barriers could prolong the recession, in just about the same manner that trade barriers made the 1930s recession a decade of depression.

In spite of these possibilities, we remain optimistic in our outlook for 1983. We will have a slow but "prudent" recovery that will pave the way for a decade of sustained economic growth.

The Indiana Economy

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Substantial improvements in employment, the unemployment rate, and real personal income are expected for the Indiana economy in 1983. This expectation is the result of a forecast made with the Econometric Model of Indiana using as inputs some of the forecasted national variables outlined in the previous article. That forecast calls for slow growth of real GNP in the first half of 1983 but somewhat faster growth in the last two quarters.

SUMMARY OF THE INDIANA FORECAST:

1. From the fourth quarter of 1982 (the first quarter forecasted) to the fourth quarter of 1983 (the last quarter forecasted) the number of jobs in Indiana is expected to increase by 74,092.

2. The seasonally adjusted unemployment rate is forecasted to decline to around 9 percent from a peak of over 12 percent.

3. Real personal income is expected to grow by about 6 percent from the fourth quarter of 1982 to the fourth quarter of 1983.

EMPLOYMENT

As stated in the summary, employment is expected to increase in 1983. Table 1 shows that the number of jobs is forecasted to rise by 53,640 from the third quarter of 1982 to the third quarter of 1983, and from the fourth quarter of 1982 to the fourth quarter of 1983 the expected increase is 74,092. (Since these data are not seasonally adjusted, year to year comparisons should be made rather than quarter to quarter comparisons.) Table 1 also shows that manufacturing employment is expected to go up by 8,010, an increase of 1.36 percent from the third quarter of 1982 to the third quarter of 1983. Over the same period nonmanufacturing employment is expected to increase by 50,740 or 3.56 percent. These seem to be tiny increases, but they look

Table 1

EMI SUMMARY VARIABLES†

Variable	*1982:2‡*	*1982:3*	*1982:4*	*1983:1*	*1983:2*	*1983:3*	*1983:4*
Personal Income*	**54,137.00**	**54,801.00**	55,808.98	56,728.43	58,484.15	60,509.07	61,930.09
Percent Income (AR)	**4.24**	**5.00**	7.56	6.75	12.97	14.59	9.73
Real Personal Income*	**26,537.75**	**26,397.40**	26,588.37	26,720.88	27,227.26	27,845.87	28,150.04
Percent Change (AR)	**.61**	**−2.09**	2.96	2.01	7.80	9.40	4.44
Wage and Salary Disbursements*	**32,389.00**	**32,370.30**	32,794.08	33,377.48	34,685.60	35,988.04	36,837.69
Percent Change (AR)	**.07**	**−.23**	5.34	7.31	16.62	15.89	9.79
Real Wage and Salary Disbursements*	**15,876.96**	**15,592.60**	15,623.71	15,721.89	16,147.90	16,561.52	16,744.49
Percent Change (AR)	**−3.41**	**−6.97**	.80	2.54	11.29	10.65	4.49
Nonmanufacturing Employment, #	**1,432.00**	**1,424.13**	1,424.07	1,396.10	1,448.58	1,474.87	1,486.60
Manufacturing Employment, #	**603.30**	**589.63**	585.50	578.55	589.18	597.64	602.48
Establishment Employment, #	**2,035.33**	**2,013.80**	2,009.57	1,974.65	2,037.75	2,072.51	2,089.08
Total Number Employed, #	**2,260.90**	**2,243.36**	2,228.75	2,184.88	2,263.23	2,297.03	2,302.84
Percent Unemployment (NSA)	**11.69**	**11.29**	11.19	11.68	10.83	9.31	8.76
Percent Unemployment (SA)	**11.75**	**11.86**	11.56	10.78	10.85	9.81	9.00

†Boldface Values are Historical Data; Later Values are Forecasted.
‡1982:2 Values are Preliminary
AR – Annual Rate
*Millions of Dollars SAAR
#Thousands of Persons, not Seasonally Adjusted
NSA – Not Seasonally Adjusted
SA – Seasonally Adjusted

good in comparison with what has happened since 1979. Manufacturing employment decreased by 19.2 percent from 1979:3 to 1982:3, while nonmanufacturing employment decreased by 6.45 percent during the same time span. These percentages illustrate a recent trend in the structure of employment in Indiana: in recessionary periods manufacturing employment decreases at a greater rate than nonmanufacturing employment, while in expansionary periods manufacturing employment increases at a slower rate than nonmanufacturing employment. This tendency represents a change from the experience in earlier periods when manufacturing employment gained more rapidly during recoveries. In part, this change reflects the shift toward service industries and a fundamental change occurring in basic industries such as steel and autos. Among other industries contract construction increased by over 12 percent from the fourth quarter of 1982 to the fourth quarter of 1983. Construction is thus the fastest growing (in employment) of the nonmanufacturing sectors. The reason for the rapid rate of growth in contract construction is that it is highly sensitive to interest rates, and interest rates are expected to fall throughout the forecast period.

Figure 1

TOTAL EMPLOYMENT: 1978:1 - 1983:3*
(Not Seasonally Adjusted)

*Data through 1982:4 are historical; later points are forecast values.

Figure 1 gives a historical perspective to the increase in total employment. In the third quarter of 1979 employment was approximately 260,000 higher in Indiana than in the third quarter of 1982; that is an average loss of over 86,000 per year for the last three years. Although we are forecasting a healthy increase in total employment in 1983, the increase is not as large as the average annual losses have been in the last three years.

UNEMPLOYMENT RATE

The seasonally adjusted unemployment rate is forecasted to decline to 9.07 percent in the fourth quarter of 1983 from its level of 11.86 percent in the third quarter of 1982 (see Table 1). This is a rapid decline in the unemployment rate. The reason is that we are expecting little growth in the labor force. From the fourth quarter of 1982 to the fourth quarter of 1983 we are expecting an increase of 14,000 in the labor force when total employment is expected to increase by around 75,000. The expected increase in the labor force in 1983 contrasts with an average loss of almost 50,000 per year from 1979:3 to 1982:3. The decreases in the labor force of Indiana were a result, we believe, of the weak economy in Indiana. Preliminary figures indicate that in the five quarters beginning with 1980:2 and ending in 1981:2 Indiana's population decreased by around 71,000 even though the number of births in the state was almost twice the number of deaths. There has been significant out-migration probably for economic reasons. The weak economy also decreased the labor force through the "discouraged worker" effect. This effect arises when a person quits looking for work because of the belief that no jobs are available. The increase in employment that we are forecasting for 1983 will cause some of the previously discouraged workers to reenter the labor force and will moderate the out-migration. For these reasons we expect Indiana's labor force to increase slightly in 1983.

PERSONAL INCOME

Real personal income is expected to grow at a brisk rate, almost 6 percent, in 1983 (see Table 1). Real wages and salaries, the major component of real personal income,

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is expected to grow slightly more than 7 percent. That real wages and salaries are growing faster than real personal income is a reversal of a recent trend. In the third quarter of 1982 real wages and salaries were 59.07 percent of real personal income, but in the first quarter of 1979 real wages and salaries were 65.43 percent of real personal income. The decline in interest rates will tend to slow the growth of the category "Dividends, Interest, Rent" but rising profits should counter the decline in interest rates. Among other components of real personal income, unemployment benefits are expected to decline as fewer people are unemployed. We are expecting farm proprietors' income to have the greatest percentage increase.

The expected increase in real personal income in 1983 is coming on the heels of an almost steady decline since the first quarter of 1979. From the first quarter of 1979 to the third quarter of 1982 real personal income has decreased by 7.85 percent. The increase in 1983 is the result of a substantial decline in the rate of inflation and a substantial increase in nominal personal income. The level of personal income at the end of the forecast is still not expected to reach the level of the first quarter of 1979.

INDIANAPOLIS

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Indianapolis is part of a region consisting of Indiana, Ohio, Michigan, Wisconsin, and Illinois which has experienced greater employment decline than any other region since January 1980, the peak of the 1980 recession. In fact, these states as a region began experiencing employment decline in 1979. To forecast the performance of Indianapolis in 1983, therefore, it is important to ask how well Indianapolis has fared since the recession beginning in 1979 compared to other metropolitan areas in this five-state region. Indianapolis has ranked third among eight areas as shown in Table 1.

Indianapolis ranked second in construction; the public and commercial sectors made important contributions with projects such as buildings on the IUPUI campus, the AUL building downtown, and several office complexes in the suburban areas near the interstate highway system. Construction employment will be supported in the first half of 1983 by projects such as the convention center expansion, the Union Station renovation, the Lilly biomedical research center and related projects, two downtown hotels, and additional suburban office parks.

In the residential housing sector, since there does not appear to be excessive inventory in single-family housing, there should be an upturn in the spring—assuming that mortgage rates continue a downward drift. However, the 7 to 8 percent vacancy rate in the apartment market will put a damper on new apartment projects.

In Table 1 Indianapolis ranked second in manufacturing suggesting that its mix of industries was somewhat less cyclical and/or its plants were more efficient than in other areas. During recession, production and employment cutbacks are usually concentrated at plants with higher variable costs, with labor costs being the most important variable cost. During recovery, on the other hand, plants where cutbacks have been severe are usually the ones that experience the greatest increases in production and employment. From this perspective, Indianapolis' manufacturing plants may not rebound as quickly because they did not contract as severely as in other areas.

Although Indianapolis manufacturing employment has contracted less than in other metropolitan areas, the contraction in Indianapolis during the current recession has been greater than the 1973-75 recession as shown in Table 2.

Auto parts manufacturing has been impacted severely while nondurables was less impacted. Also, Table 2 shows that in the 1973-75 recession, government was countercyclical, while in the current one government is procyclical. Reasons for the procyclical pattern in government include reductions in elementary and secondary teachers, attrition in state and local government, and cutbacks in federal programs. To the extent that these contractions reflect demographic and policy changes, expansion cannot be expected during the first half of 1983.

STRUCTURAL CHANGE

The 1979-82 recession has been different from earlier postwar recessions in the following ways. It has been longer; major industries have contracted to long-time lows; and government has not been countercyclical. Also, for Indianapolis a structural change occurred during the period 1973:4-1979:4 which should affect the nature of the recovery in 1983. This period of time was selected because it was from one peak in the business cycle to the next, thereby eliminating the effect of cyclical change. The specific structural change is that Indianapolis has become less

Table 1

RANKINGS OF TOTAL EMPLOYMENT CHANGE AND SELECTED INDUSTRIES BY METROPOLITAN AREA, 1979-81*

Metropolitan Area	*Total Employment*	*Construction*	*Manufacturing*	*Finance, Insurance Real Estate*	*Services*
Chicago	1	5	4	1	1
Columbus, OH	2	4	1	2	2
INDIANAPOLIS	**3**	**2**	**2**	**5**	**3**
Cincinnati	4	6	3	6	5
Milwaukee	5	7	6	3	4
St. Louis	6	1	5	7	6
Louisville	7	3	7	4	7.5
Detroit	8	8	8	8	7.5

*First ranking is the area with the most gain or least loss in annual averages in employment.
SOURCE: U.S. Department of Labor, *Employment and Earnings.*

Table 2

INDIANAPOLIS METROPOLITAN AREA EMPLOYMENT CHANGE BY SELECTED INDUSTRIES DURING THE 1973-75 AND 1979-82 RECESSION

Industry	*Employment at cycle trough as percent of employment at peak*	
	1973-75	*1979-82*
Total employment	95.9	94.2
Manufacturing	86.4	82.5
Durables	84.0	77.6
Autos and parts	66.5	47.5
Nondurables	90.5	94.3
Nonmanufacturing	97.8	96.1
Construction	71.7	78.0
Retail	96.1	96.2
Finance, real estate, Insurance	99.1	97.2
Services	99.1	100.0
Government	106.2	91.7

SOURCE: Indiana Employment Security Division.

Table 3

CHANGE IN COVERED EMPLOYMENT AND PAYROLL FOR SELECTED INDIANAPOLIS METROPOLITAN AREA INDUSTRIES, 1973:4-1979:4

	Percent Change, 1973:4-1979:4		
Industry	*Employment*	*Payroll*	*Payroll per Employee Index*
All industry	28.1	25.7	100
Nonelectrical machinery	−12.6	−5.4	116
Electrical machinery	1.3	11.0	106
Transportation Equipment	−4.3	3.7	155
Instruments	248.9	265.5	91
Business services	43.4	46.2	63
Health services	47.1	70.2	78
Legal services	56.1	56.9	106

†1973 dollars.
*Payroll per employee in given industry relative to all-industry average, 1973.
SOURCE: Indiana Employment Security Division.

dependent on the cyclical durable goods industries for employment although these industries will continue to play a very important role in generating wages and salaries. Table 3 shows change in covered employment and payroll for selected Indianapolis industries.

Instruments, the largest percentage gainer, includes measuring and controlling devices, and medical instruments. It consists of firms such as Boehringer Mannheim (including Bio-Dynamics), Esterline Angus, Wavetek, Texscan, American Monitor, and Nuclear Measurement. Other above-average gainers are business, health, and legal services. Business services include advertising, credit reporting, building maintenance, and computer and data processing (such as Anacomp). Health services includes hospitals, physician and dentist offices, and medical laboratories. Instruments and the services tend to be less cyclical than certain durable goods industries.

Although the employment growth in services is impressive, they as a group do not pay the same wage rates as the durable goods industries, as shown in Table 3. Thus, although it is good to have the employment growth, the income generating capability of the services employment is not yet as great as the more capital-intensive durable goods employment that is stagnant or declining. This structural change means that the vigor of the recovery will be moderated compared to what it would have been without the change.

GOVERNMENT

As noted above, government has been procyclical in this recession. The property tax is the primary revenue-generating source for local government. The recession has reduced the rate of increase in the net value of taxables (real property plus personal property minus exemptions). Also, there is significant variation in the rate of increase among the counties of the Indianapolis metropolitan area as shown in Table 4.

Table 4

PERCENT CHANGE IN NET VALUE OF TAXABLES FOR JURISDICTIONS IN INDIANAPOLIS METROPOLITAN AREA, 1981-82

County	*Percent change*
Marion	2.28
Center Township	0.53
Hancock	2.60
Hendricks	4.21
Hamilton	5.10
Johnson	4.37
Boone	2.83
Shelby	1.47
Morgan	1.50

SOURCE: Indiana Auditor's Office.

As a result of the different tax bases, there are different tax rates and bundles of locally-provided services. For example, the property tax rate in Center Township is $11.21 compared with $7.16 in Carmel and $5.10 in Greenwood. Center Township's tax base is eroded by building demolitions and relatively large numbers of exemptions for elderly property owners, rehabilitated properties, and charitable and government structures. Thus, local government is not expected to be a primary contributor to employment growth in the first half of 1983.

The Indianapolis economy has held up well relative to the depressed multistate region of which it is a part. The cyclical durable goods and residential construction industries should experience a moderate recovery in 1983 if inflationary expectations can be controlled. The structural change discussed above adds some stability to the economic base and provides a basis for optimism in the near-term future.

SOUTH BEND

ELKHART

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The South Bend and Elkhart economies continue to labor under the burden of recession that first appeared with the decline of transportation equipment and other durable goods production in mid-1979. As we close out 1982, no sector of the region's economy has escaped the effects of the decline: unemployment is high; there is considerable unused industrial capacity; commercial activity is slow; housing activity is nearly nonexistent; and business failures mount.

Tables 1 and 2 give various indicators of local economic activity for the South Bend and Elkhart communities. The figures contained in the tables are seasonally adjusted and, with the exception of the unemployment rates, are index numbers expressed as a percentage of 1967 base year values. In each table, comparative index numbers are averaged for the years 1981 and 1982 through August. Index numbers are also given for an August 1981/August 1982 comparison. In addition, since 1981 was in itself a year of recession, comparable data are provided for 1978, the last full year of somewhat "normal" activity experienced locally.

Table 1

SELECTED INDICATORS FOR SOUTH BEND
(Seasonally Adjusted: 1967 = 100)

Indicator	*Average 1978*	*Average 1981*	*Average Jan.-Aug. 1982*	*August 1981*	*August 1982*	*% Change August 1981-August 1982*
Industrial electricity sales*	106.9	127.9	126.5	113.1	131.1	15.9
Natural gas sales+						
Commercial	140.1	134.0	140.7	134.4	132.1	−1.7
Industrial	88.9	89.7	105.9	79.3	80.0	0.8
Employment data†						
Nonagricultural employment	113.5	112.6	108.8	111.1	108.6	−2.3
Manufacturing employment	91.9	83.6	81.0	84.1	81.0	−3.7
Nonmanufacturing employment	127.0	130.3	126.3	128.0	125.9	−1.6
Help wanted index*	166.4	69.1	59.0	71.5	53.4	−25.3
Unemployment rate† (Percent of work force)	5.8	8.9	10.2	8.1	9.6	18.5
New passenger car sales†	135.7	81.1	69.5	77.7	72.8	−6.3
New truck sales†	335.8	114.2	126.0	123.6	134.0	8.4
Construction data #						
Estimated value of new Housing permits	407.3	148.2	95.4	90.7	63.5	−30.0
Number of new housing Permits issued	160.0	44.3	28.6	26.9	19.2	−28.6
Average value of new Housing permits	265.0	358.0	380.3	362.4	365.3	0.8

*South Bend.
+St. Joseph County.
†South Bend SMSA.
#St. Joseph County excluding the cities of South Bend and Mishawaka.
NOTE: All construction data has a base year of 1970 = 100.
SOURCE: Bureau of Business and Economic Research, Indiana University at South Bend.

SOUTH BEND

Nearly all indicators suggest that the South Bend economy is not only suffering but is suffering as badly today as at any point during these three and a half years of recession. Adding to short-term concerns is the fact that a number of plant closings and relocations have been announced in recent months which tend to dampen the longer-term outlook for the area.

On the brighter side, the reopening of Robertson's—downtown South Bend's major department store—is heartening news. Robertson's has always been looked upon as an "anchor" in the development of South Bend's downtown mall. In addition, work has recently begun on New Energy Corporation's South Bend ethanol plant which will significantly boost area construction activity for a period of 2 to 3 years, and will ultimately employ some 140 full-time workers. Given the export nature of the product and predictable multiplier effects, the ethanol addition can be expected to indirectly provide several hundred additional jobs and as much as $16 million new dollars of yearly regional income.

Table 2

SELECTED INDICATORS FOR ELKHART
(Seasonally Adjusted: 1967 = 100)

Indicator	*Average 1978*	*Average 1981*	*Average Jan.-Aug. 1982*	*August 1981*	*August 1982*	*% Change August 1981-August 1982*
Industrial electricity sales*	150.4	173.3	178.5	169.7	163.2	−3.9
Natural gas sales*						
Commercial	161.2	156.2	175.0	137.5	168.0	22.1
Industrial	236.7	254.2	267.3	259.8	245.0	−5.7
Employment data+						
Nonagricultural employment	177.2	129.3	125.5	130.0	124.7	−4.1
Manufacturing employment	141.1	111.6	108.1	113.3	107.9	−4.8
Nonmanufacturing employment	260.0	249.3	242.9	245.8	242.3	−1.4
Unemployment rate+						
(Percent of work force)	4.9	10.2	10.5	7.8	9.8	25.6
Construction data†						
Estimated value of new Housing permits	303.9	102.9	136.7	91.7	97.3	6.1
Number of new housing Permits issued	198.3	41.1	50.4	33.9	48.0	42.0
Average value of new Housing permits	179.6	251.0	275.5	278.8	208.0	−25.4

*City of Elkhart.
+Elkhart SMSA.
†Elkhart County excluding the cities of Elkhart and Goshen.
NOTE: All construction data has a base year of 1970 = 100.
SOURCE: Bureau of Business and Economic Research, Indiana University at South Bend.

ELKHART

Conditions in Elkhart are similar to those in South Bend. Of particular concern is the loss of jobs due to the recession. As noted in Table 2, the 1978/1982 comparison shows a 29 percent reduction in nonagricultural employment during the period. The severity of the situation is explained in part by the fact that more than 50 percent of the Elkhart workforce is employed in manufacturing, and 70 percent of those are employed in recession sensitive durable goods manufacturing.

One important sector of Elkhart's economy—the recreational vehicle manufacturing sector—has held its own by posting overall shipment increases in both 1981 and 1982. While specific Elkhart numbers are not available, the industry as a whole expects to close out 1982 with a 6 percent increase in shipments.

OUTLOOK

The prospect for a national recovery in 1983, however moderate, is welcome news for the South Bend and Elkhart communities, since local recovery is dependent upon improvement in national forces. Reduced inflation, lower interest rates, improvement in automobiles and other durables, and a turnaround in housing all suggest improvement here—slow, moderate improvement, but improvement nevertheless. Overall, we should see an increase of about 3 percent in local employment by the third quarter of 1983, thus returning the area to about where it stood in mid-1981.

EVANSVILLE

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Before looking into the economic picture of 1983, it is appropriate to review the happenings in the 1982 Evansville economy. Nineteen eighty-two was a year of disappointment in economic performance for the nation as well as the Evansville region. The expected ending of the 1981-82 recession came in the second quarter for the local economy, but the phase of recovery has not really started yet. Measured in terms of the Evansville Area Business Index, the composite index declined 2.7 percent in 1982 (see Table 1). The cause of prolonged stagnation lay in the stubbornness of the interest rate to come down enough to stimulate economic growth. All sectors except the financial sector in the local economy registered a decline in 1982. The only comforting statistic was a decline in the local unemployment rate from January's 11.0 percent to August's 8.2 percent. In September, however, this rate jumped to 9.6 percent due to more job-seekers joining the labor force and a tightening labor market.

The outlook for the 1983 economy depends on many factors. The forecast here is based on the following assumptions: (1) the inflation rate will stay between 5 to 6 percent; (2) the prime rate will continue to decline in the first half to the range of 9 to 10 percent, and it will rise slightly in the second half due to a possible slowdown in the money supply; (3) the unemployment rate for the region will stay around 9 percent until spring and then decline to the 7 to 8 percent range by the end of 1983.

Based on the above assumptions, the manufacturing sector should improve by 2 to 3 percent to the level achieved in 1981. The main thrust of improvement will come from rising factory orders, housing starts, and the increase in real personal income.

These positive elements will be partially offset by the closings of a construction machinery factory and a compressor-producing unit of the largest local employer. Wholesale and retail trade should improve as consumer spending is stepped up in home appliances and automobiles. Housing construction will start to move up as the mortgage rate declines. The business construction sector showed a big gain in the second half of 1982 which should continue throughout 1983. The transportation sector will grow in relation to manufacturing activities. The financial sector will definitely recover costs of credit and make lending activities easier than before.

The employment picture will not improve significantly until spring or until the time when business sees a clear trend of economic recovery. The unemployment rate will remain around 9 percent until March 1983, and it may decline later. The growth of employment will be more in nonmanufacturing industries than in manufacturing industries. The absence of automobile assembly industry in the Evansville region has accounted for the low unemployment in this region compared to other SMSAs in Indiana.

In terms of the Evansville Area Business Index, the total index should rise by about 2 percent in the first half and 1 percent in the second half, or a yearly growth of about 3 percent. The chance of realizing such a growth is more promising this year than in the previous three years. The no-growth economy for the 1980-82 period may come to an end in 1983 if the fluctuations in money supply can be controlled within the target range by the monetary authority. A growth economy will also require an equal emphasis on the aggregate demand of the national economy. This means that a readjustment in Reagan's supply-side policy is in order.

Table 1

EVANSVILLE AREA BUSINESS INDEX
(Revised; 1977 = 100)

Time Period	*Industrial Production*	*Trade and Services*	*Construction*	*Transportation*	*Finance*	*Employment*	*Composite Index*
Monthly Index 1982							
January	103.44	101.86	91.73	98.93	99.03	104.80	101.56
February	108.99	101.05	88.87	94.62	101.86	103.51	102.39
March	112.29	101.73	94.45	94.08	103.99	103.49	104.50
April	107.00	101.13	92.74	94.68	104.83	102.88	102.35
May	103.26	100.15	91.42	94.82	104.00	101.99	100.48
June	104.99	102.52	98.12	93.94	101.92	103.21	102.51
July	104.10	100.70	109.12	91.50	101.79	102.28	102.28
August	99.71	102.79	111.22	94.06	102.72	102.72	102.37
Annual Index							
1979	106.30	107.28	114.41	104.85	109.05	108.59	107.66
1980	106.38	103.90	109.41	101.57	103.38	105.08	105.20
1981	108.83	102.28	107.63	98.94	97.75	105.57	105.01
1982 (est.)	105.07	101.52	102.00	94.38	102.26	103.04	102.21
1983 (proj.)	107.50	103.00	110.00	97.00	104.00	105.00	104.55

SOURCE: School of Business Administration, University of Evansville.

RICHMOND

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The Richmond area economy continues to experience the adverse effects of the current recession. Increased layoffs in both manufacturing and nonmanufacturing enterprises have come about because of the prevailing conditions of high interest rates and slack consumer demands. The hardest hit establishments are transportation equipment, electrical machinery, nonelectrical machinery, construction, finance, real estate, and retail trade. This is reflected in the current unemployment rate of 14 percent. The unemployment rate is likely to increase given the local economy's sensitivity to the national economy.

Further, it is important to note that about 61 percent of covered employment activities in Region Nine are concentrated in Wayne county, followed by Fayette with 24 percent, Rush with 9 percent, Franklin with 4 percent, and Union with 2 percent. By major industry division, manufacturing, services, and trade predominate in this Region with 42, 21, and 20 percent, respectively. Thus, if the recession worsens, it can have far-reaching effects not only on Richmond but also throughout Region Nine. The loss of businesses means the loss of jobs, and the loss of jobs means the loss of people from this Region.

The longer-term outlook on population out-migration from Wayne county is also not so encouraging. By the year 2000, it is projected that this county would suffer a net migration loss of 3.3 percent or end up with a population of 73,500 of which 40,000 would be in Richmond. To offset this projected loss it is incumbent upon city fathers and decision-making entities to attract new avenues of employment, particularly in high technology industries such as aerospace, electronics, computers, telephones, microprocessors, and semiconductors. The traditional manufacturing industries such as automobile and steel have simply lost their relative comparative advantages, and modernization of these industries would not solve the structural unemployment problem.

To our institutions of higher learning this will mean a reallocation of resources to meet the manpower needs of a high technology sector which is fastly becoming pervasive. It may also involve a national partnership of federal and state governments, private industry, and academia in order to expand and improve science and engineering education.

Linked to the unemployment problem is consumer spending. So far retail sales in the local economy have not been vigorous. When people are unemployed or uncertain about their jobs, they do not buy big-ticket items. This consumer behavior pattern may be partly due to an apparent waning confidence in supply-side economics/Reaganomics. Since consumption spending, in particular, accounts for at least 50 percent of the gross local income, retail sales will eventually dictate the pattern of recovery. A recovery psychology is yet to emerge in the Richmond area.

However, the individual income tax cut and increase in Social Security benefits implemented last July, coupled with businesspersons' optimism about conditions in 1983, could improve the employment picture in Richmond. If the anticipated turnaround in the national economy takes place next year, retail sales will improve locally. Consumers will then release their pent-up demands on household durables as their real incomes increase.

A caveat is in order at this point. The projected federal deficits are going to get larger and larger if there is no curtailment on defense spending and transfer payments. Such deficits will fuel intense pressure on the financial markets and ultimately effect wild swings in the rates of interest. Furthermore, given the severity of the world recession and the fragile state of the world's credit markets, there is an intense shift among central bankers to re-inflate the international financial system. The Federal Reserve must resist such a shift despite its recent decision to ignore a rise in the M1 measure of the money supply above target. To do otherwise, the Fed will reignite inflation and thereby dampen recovery prospects.

In addition, I think a constitutional amendment requiring a balanced budget is not the solution to the problem of deficits. It is impracticable to have simultaneous supply-side tax cuts, monetary controls, fiscal balance, and defense boosts. The true burden of government is reduced, not just by cutting taxes but by lowering spending as well. Congress should therefore use the processes it already has to balance the budget rather than writing fiscal policy into the Constitution.

In sum, I expect a modest recovery in the local economy by mid-1983 though a double digit unemployment rate may persist for some time.

TERRE HAUTE

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On October 12, 1982, CBS announced the closing of virtually all of its CBS Record Division operations in Terre Haute. The 1,250 employees then remaining in the record plant and the tape plant lost their jobs. Employee dismissals began on November 11, and the factories should close early in 1983. CBS will continue local operations of the Columbia House mail order sales division, and will continue to utilize a small batch mixing plant.

Employment in the CBS manufacturing plants had been declining for about four years, a period which coincides with a general decline in the local economy. The local employment reports include CBS manufacturing employees in the category, *All Other Durable Goods*. Employment in that category peaked at 5,100 in January 1979. A year later it fell to 4,600, declining further to 3,500 by January 1981, and to 2,800 by January 1982. By September 1982, manufacturing employment in *All Other Durable Goods* had dwindled to 2,200.

In November 1978, unemployment for the Terre Haute area was estimated at 4.5 percent, or 4.8 percent with seasonal adjustment; the estimate for September 1982 was 11.3 percent, or 12.9 percent with seasonal adjustment. Terre Haute area establishment employment reached its peak somewhat later, but dropped swiftly from 69,800 in October 1979 to 56,700 in September 1982—18 percent in thirty-five months.

CBS had been by far the largest employer in Terre Haute, and its production cutbacks had been a major factor in the deterioration of the local economy. In addition to the direct impact, a number of local firms supplied packaging materials and services to the firm, and, of course, CBS workers spent their incomes locally. However, CBS was not the only negative—business closings included Eastern Express, Ann Page, Stran Steel, Ethyl Visqueen (which plans to resume limited operations), and for 1983, Volt Information Sciences. Other firms have retrenched with the national economy, or have faced special industry problems. It would be hard, though, to exaggerate the impact of the CBS closing on economic prospects for Terre Haute. CBS was the first major employer to come into a badly depressed community in the 1950s. Employment growth in the late 1960s and early 1970s helped spark a community awakening. Corporate contributions did much to foster the arts locally. The plant closings bring not only a further loss of 1,250 jobs, but the irretrievable elimination of the much larger number of jobs once furnished.

Were it not for the CBS shutdowns, the local outlook for 1983 would have been somewhat less gloomy than a year ago, and certainly less bleak than last spring. Then, each and every sector, or industry, appeared to be going downhill; now, a few bright spots are beginning to appear.

Area farmers still face low crop prices, but hogs are priced reasonably in relation to feed costs, and this year's crop was much improved both in terms of yield and in terms of drying costs. Inflation in production costs has moderated, and costs may even decline in the coming year. Suppliers of agricultural products, including J.I. Case, C.F. Industries, IMC, Pfizer, and Eli Lilly, must contend with two consecutive bad years for farmers nationally, and their prospects have not improved.

Construction shows a slight glimmer of improvement. In the first half of the year virtually all new permits were for government projects, or projects with government subsidy. But second half permits included new buildings at Pfizer, at Public Service Indiana, at our two private colleges, and a new Kroger store. More permits were issued for non-subsidized residences, but at the recent rate of twelve per month it would still take two hundred years to replace the existing housing stock. Construction employment, which has declined from a cyclical peak of 4,600 to 2,500, will decline further.

Conditions in resale real estate markets, presently in shambles, can only improve. Lower interest rates will help by making houses more affordable, by improving the health of financial institutions, leading to increased availability of funds, and by reducing the costs of moving for those who currently benefit from nontransferable, or imperfectly transferable, low-interest mortgages. Prices of existing homes, already attractive by national standards, are expected to decline further, making Terre Haute an easy place to own a home.

Terre Haute will not, in 1983, participate in the expected state and national recovery, from what, at least locally, has been a protracted depression. We expect the local unemployment rate to top 15 percent by January, if not by December. Later reductions in the unemployment rate will come largely from labor force attrition. Local governments will be hard pressed to furnish requisite services, and may find the task impossible. The real question is not for 1983, but beyond—can the community work together to build a new base for eventual prosperity?

GARY–HAMMOND EAST CHICAGO (Calumet Area)

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Our prediction made in the June 1982 issue, while correctly projecting a continued 1982 decline in steel employment and output, underestimated the severity of the downtrend. The precipitous decline in the manufacturing or so-called export sector, which sells its output in national markets, has significantly contributed to the slippage in all other indexes of economic activity. May 1979, according to our long-run econometric models, might be the upper turning point of a five and a half year cycle. From May 1979 to September 1982 we have lost almost 18 percent in total employment, 40 percent in manufacturing employment, 33 percent in steel employment, and a whopping 53 percent in steel-related manufacturing and metal-fabricating employment. The latter is most serious as it was caused by an extensive exodus of small and medium-sized plants. All employment statistics in the export sector are projected to be below their 1981 highs, and both the export and the domestic private sector are projected to be significantly below their respective 1979 highs in all of 1983. Our forecast for the Calumet Area is detailed in Table 1.

The loss of leveraged income flows from the export sector had a serious dampening effect on local business activity. Although hourly wages in manufacturing rose 25 percent from the peak of 1979 to September 1982, from the high to the low of the present cycle, the real, that is deflated, value of manufacturing payrolls fell 62 percent. Even in current, undeflated dollars, there was a loss of almost 19 percent. At some point money illusion will have to yield to realism. There is reason to expect that major manufacturing firms will emphasize this condition to encourage labor to adopt a more realistic bargaining stance.

Unemployment is not a natural state of the private market. The economy is out of tune because wages, prices, interest rates, and entrepreneurial rewards are not at their equilibrium levels. Balance can be restored by a dynamic process with all four measures simultaneously converging to their equilibrium values. At best this is a difficult task. The key, as always, is entrepreneurship. Jobs, old or new, must be created by entrepreneurs who will be attracted into the market if entrepreneurs who are now in the market are doing well; that is, earning at least their opportunity cost. The supply siders are correct on at least one count; namely, entrepreneurship has never been spurred by schemes to redistribute income. The cyclical record over several decades clearly indicates that recovery tends to be advanced by rising real after-tax profits, seldom by rising real after-tax wages, uncompensated by productivity.

Lower interest rates tend to reduce the opportunity costs of entrepreneurship. Lower real wages, adjusted for productivity, also tend to reduce the opportunity cost of entrepreneurship. Some public programs such as purchases, military or civilian, may also reduce the opportunity cost of entrepreneurship while others such as social outlays and transfers may have uncertain or possibly detrimental effects. The rise in compensation of employees, as a proportion of income, from 70.6 percent in May 1979 to its current 76.3 percent level, substantiates the relative unattractiveness of local entrepreneurship over the 1979-82 downturn.

Demand for local manufacturing, particularly steel, is derived from the demand for autos, durables, construction, and investment in machinery. Big-ticket items tend to lag behind other consumer spending. Consequently, local manufacturing will perk up only after a 5 to 6 percent spurt in real GNP. Thus, we expect the local economy to lag at least one quarter and possibly two quarters behind the anticipated recovery in 1983.

A ten-year study of the econometric relationship between local steel output and employment and real auto sales (net of imports) and our composite interest rate index, shows that local steel is positively correlated with an exponentially weighted average of auto sales, lagged five to ten months. Similarly, local steel is negatively correlated with an exponentially smoothed series of interest rates, lagged five to ten months. The conclusion that can be drawn is that local steel will recover only after autos show consistent gains and interest rates show a consistent decline (one that will be anticipated). We may fully benefit from such positive factors about five months after the upturn.

In sum, the unpleasant fact remains that, before the local economy can climb up the Laffer curve, which trades tax remissions and higher entrepreneurial rewards for higher productivity and expanded output, one must first slide down the Phillips curve, which trades reduced rates of inflation for higher rates of joblessness. In one sense, at least, the local economy is healthier now than it has been in a long time. Debilitated perhaps by a painful episode, yet it is poised for ultimate recovery, along what we believe will be a five and a half year cycle extending from the upper turning point in May of 1979 to the beginning of 1985. The single caveat is that if large-scale public jobs programs are introduced in the interim, a movement which may gather momentum, the expanding labor force will re-enter the market for consumer goods in ever greater numbers, and, unless fiscally restrained, will rekindle inflation before we can ascend high enough on the proverbial Laffer curve.

Table 1

PAYROLL AND EMPLOYMENT (CALUMET AREA)*

	1978 Jan.	*1979 High*	*1980 Low*	*1981 High*	*1982 Sept.*	*1983 March*	*1983 June*	*1983 Sept.*
Primary Metals Payroll in Billion Real 1978 Dollars	**1.41**	**1.59**	**1.05**	**1.36**	**0.99**	1.03	1.08	1.11
Index: 1978 Jan. = 100	**100.00**	**113.77**	**72.74**	**97.09**	**70.94**	72.81	76.72	79.11
Primary Metals Payroll in Billion Current Dollars	**1.41**	**1.72**	**1.39**	**1.95**	**1.55**	1.65	1.80	1.94
Index: 1978 Jan. = 100	**100.00**	**130.67**	**98.51**	**126.77**	**110.08**	117.07	127.73	138.09
Export Sector: Manufacturing & Construction in Billion Real Dollars	**2.29**	**2.63**	**1.81**	**2.12**	**1.63**	1.67	1.70	1.76
Index: 1978 Jan. = 100	**100.00**	**115.17**	**79.04**	**92.77**	**71.31**	73.11	74.23	76.89
Export Sector Payroll in Billion Current Dollars	**2.29**	**2.97**	**2.39**	**2.85**	**2.50**	2.64	2.78	3.02
Index: 1978 Jan. = 100	**100.00**	**130.90**	**104.63**	**124.04**	**109.49**	115.56	121.59	132.21
Domestic Private Sector: Nonmanufacturing Payroll, Excl. Government, in Real Dollars	**1.15**	**1.28**	**1.17**	**1.24**	**1.16**	1.19	1.23	1.24
Index: Jan. = 100	**100.00**	**111.38**	**102.26**	**107.79**	**100.87**	104.13	106.98	108.12
Domestic Private Sector Payroll, in Current Dollars	**1.15**	**1.46**	**1.39**	**1.61**	**1.79**	1.92	2.04	2.16
Index: 1978 Jan. = 100	**100.00**	**126.97**	**120.94**	**140.73**	**156.39**	167.44	178.12	188.73
Total Employment (in 000s)	**229.80**	**274.90**	**248.50**	**252.40**	**234.60**	238.90	243.50	248.60
Index	**100.00**	**119.62**	**108.14**	**109.83**	**102.09**	103.95	105.96	108.18
Export Sector: Manufacturing & Construction	**112.90**	**127.60**	**104.10**	**108.50**	**92.10**	93.20	94.80	98.57
Index	**100.00**	**113.02**	**92.21**	**96.10**	**81.58**	82.55	83.96	87.30
Other Steel-based Manufacturing	**31.80**	**35.10**	**27.80**	**25.70**	**22.90**	21.20	21.30	22.10
Index	**100.00**	**110.38**	**87.42**	**80.82**	**72.01**	66.67	66.98	69.49
Steel Mills	**64.10**	**69.30**	**56.10**	**63.80**	**52.50**	53.10	55.20	58.44
Index	**100.00**	**108.11**	**87.52**	**99.53**	**81.90**	82.83	86.11	91.17
Private Domestic Sector Nonmanufacturing, etc.	**102.00**	**116.80**	**108.60**	**113.20**	**111.50**	114.30	117.20	117.63
Index	**100.00**	**114.51**	**106.50**	**110.98**	**109.31**	112.05	114.90	115.32
Government incl. Education	**31.00**	**29.20**	**32.40**	**30.80**	**31.70**	31.40	31.50	32.40
Index	**100.00**	**94.19**	**104.52**	**99.35**	**102.26**	101.29	101.61	104.52
Retail Sales in Real Dollars	**100.00**	**117.33**	–	**103.78**	**91.71**	94.62	98.1	104.13
Chicago & Northern Indiana Index of Metropolitan Business Activity	**100.00**	**113.9**	**103.4**	**107.5**	**101.2**	102.3	104.5	106.8

*Boldface Values are Historical Data; Later Values are Forecasted.

FORT WAYNE

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The forecast for the Fort Wayne area economy in 1983 is a repeat of the forecast for 1982. The original forecast for 1982 stated: "The most optimistic outlook for year-end 1982 is for modest improvement over current conditions; however, this can easily be reversed by new chapters in the International Harvester saga." Consistent with the 1982 forecast, the area economy appears to be building a base to recover in line with the *IBR* 1983 outlooks for the Nation and the State, but the recovery will be buffeted periodically by the already announced phased pullout of IH production facilities throughout 1983. Consequently, the net change in area employment by year-end 1983, compared with year-end 1982, is likely to be up nominally. Eight hundred jobs are scheduled for elimination in the late summer of 1983 and the remaining eight hundred will be dropped when production ceases at the end of 1983.

An analysis of recent trends in area employment illustrates the tendency of the area economy to lag behind changes in business activity nationally. This occurs because of the area's heavy emphasis on durable goods manufacturing, the most volatile sector. October 1982 Fort Wayne SMSA[1] nonagricultural payroll employment is 160,500 (seasonally adjusted). This is 24,800 below the March 1979 peak of 185,300. Employment in all sectors fell relentlessly throughout 1980, shrinking by 12,100. The best the area economy could muster in responding to the national economic upturn which began officially in July 1980, was to stabilize five months later in December. When the national economy again tipped into recession beginning in July 1981, the area economy began an uninterrupted ten month decline, losing an additional 12,900 jobs. Area employment has been stable since June, and now awaits with a lag—the reawakening of the national economy.

Much publicity has surrounded IH's travails, and it is natural to assume that the area economy has suffered primarily because of them. This is only partially true. A recent study[2] reaffirms the common perception that the smokestack states—Illinois, Indiana, Michigan, Ohio, and Wisconsin—have suffered the worst recently, of the nine economic regions into which the nation is divided. From January 1980 through March 1982, employment in the East North Central region—the smokestack states—declined declined almost 6 percent. A 6 percent decline in area employment during the comparable period would translate into approximately 11,000 jobs. The actual loss in jobs was 15,500.[3] Certainly Fort Wayne has suffered disproportionately because of IH, but Fort Wayne's economic problems transcend IH. The current problem with the Fort Wayne economy and the East North Central region is its structure, not the particular companies which happen to make up that structure!

Because of a slower than expected recovery of the national economy and the differential problems of IH, area employment did not stabilize in 1982 as forecast, but rather lost approximately 10,000 jobs (third quarter 1981 through third quarter 1982). Over half, 6,100 jobs, were in durable goods manufacturing. Of the sixteen types of employment monitored, none increased.

The sustained contraction in area economic activity has had a devastating effect on housing construction. Building permits issued for new single family housing construction in Allen County will total around 200 for the year. This is 55 percent of last year's total and only 10 percent of the 1978 peak year total of 1,954 permits. Forecasting 1983 construction activity is very difficult because of (1) limited knowledge about the current inventory of available housing and (2) the substantial impact of the planned cutbacks by IH. Hopefully, at least 300 to 400 starts will be realized in 1983. The forecast represents a large percentage increase but is anemic compared to the four digit activity regularly experienced throughout the 70s.

The forecast for 1982 assumed the status quo with respect to plant closings but warned of such: "One forecast-related assumption is that no major plant closing or relocation will occur in the Fort Wayne area although the significant probability of such has to be acknowledged." The 1983 forecast takes into account the planned cutbacks by IH, but assumes no additional large shocks. This is not to suggest that the probability of such has decreased. For example, it makes little sense for IH to maintain its engineering facility in Fort Wayne except that (1) the announced closing of the production facility is made more politically palatable and (2) IH may not have sufficient resources presently to move it. Accordingly, IH has made a short-term commitment to keep the engineering facility here.

In summary, the 1983 forecast for the Fort Wayne area economy is for a mild upturn by year-end 1983. This isn't exciting, unless compared with an uninterrupted string of losses for the last three years.

[1] Adams, Allen, DeKalb, and Wells Counties.
[2] Lynn E. Browne, "Two Years of Stagnation: A Regional Perspective," *New England Economic Review*, September-October 1982, pp. 35-44.
[3] The total loss in area jobs was noted previously to be 24,800. Approximately 4,500 jobs were lost both before and after the period of the study, January 1980 through March 1982.[2]

JEFFERSONVILLE NEW ALBANY (Louisville Area)

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Nineteen eighty-two has been a grim year for the Louisville area economy. The rather steep decline in employment, production, and construction which was evident during the last quarter of 1981 continued through the first three quarters of 1982. By October there were a few signs of a reversal of that trend, but thus far they suggest at best a weak upturn during the next several months.

Total non-farm employment in 1982 fell throughout the five-county metropolitan area, which consists of Floyd and Clark counties in Indiana and Jefferson, Oldham, and Bullitt counties in Kentucky. This year there were about 16,000 fewer jobs than in 1981, and about 35,000 fewer jobs than at the pre-recession peak in 1979. Most of the employment declines occurred in manufacturing. As is normal in a recession, durable goods such as machinery and transport equipment and, to a lesser extent, metal and wood products, suffered the heaviest job losses. The extensive layoffs at such major employers as Jeffboat in Indiana and General Electric, Ford, and International Harvester in Kentucky have been widely publicized. Nonmanufacturing gained about 1,500 service sector jobs, but layoffs in other areas, particularly construction, transportation/communication/utilities, and government, produced a net loss of about 4,000 nonmanufacturing jobs in 1982—and a decrease of about 10,000 jobs since 1979.

In 1982 the recession spread unquestionably to Indiana establishments, which had generally been able to maintain employment levels through most of 1981. Total employment in Clark and Floyd counties declined by more than 4,000 workers in 1982. Hardest hit were metals and machinery manufacturers, such as Jeffboat, and government employment, which declined by nearly 3,000 jobs.

The sharp slump in manufacturing activity is evident in both the employment data given in Table 1 and the industrial production index shown in Table 2. While some of the manufacturing job losses are cyclical phenomena which will be reversed as the economy rebounds, a substantial portion of the job loss is likely to be permanent. The manufacturing employment decline actually began in mid-1978, more than a year before recession was evident elsewhere in the economy. At its 1978 high point, the manufacturing sector had not yet regained the employment level that prevailed before the 1975 recession. A similar streamlining of the manufacturing labor force is to be expected in the next upturn. The recovery of manufacturing jobs will be further slowed by the permanent closing of several local plants during the last two or three years and continuing long-run problems in several others.

As is true nationally, Louisville area home sales and construction have been very adversely affected by the escalating prices of the late 1970s and the high interest rates of the past two or three years. Construction employment, already depressed in 1981, declined by another thousand workers in 1982 in the five-county metropolitan area. Real estate sales in southern Indiana counties fell by about 30 percent.

Jefferson county, which includes the city of Louisville, issued only 300 building permits for single-family residences in the first nine months of 1982, compared with about 500 in the same period of 1981 and about 1,400 in 1979, before the recession. Considering their smaller population, Clark and Floyd counties fared slightly better. The two Indiana counties issued permits for 200 single family residences in the first nine months of 1982, compared with 450

Table 1

ECONOMIC INDEXES, LOUISVILLE METROPOLITAN AREA, 1979-1982
(Seasonally Adjusted; 1967 = 100)

Annual Averages	*Industrial Production Index*	*Trade & Services Index*	*Construction Index*	*Financial Index*
1979	120.7	150.1	150.6	365.2
1980	107.1	141.1	122.8	390.2
1981	105.8	142.7	122.3	401.0
Quarterly Averages				
1981:				
Q1	107.3	148.8	130.2	388.3
Q2	111.6	141.7	131.2	381.1
Q3	106.1	141.6	123.3	393.7
Q4	98.1	138.7	104.4	440.8
1982:				
Q1	102.3	141.1	103.2	442.7
Q2	100.4	143.9	95.6	442.9
Q3	97.7	141.1	91.9	470.4

SOURCE: Research Department, Louisville Area Chamber of Commerce.

Table 2

LOUISVILLE AREA EMPLOYMENT AND UNEMPLOYMENT, 1978-1982*

	Louisville Metropolitan Area #			*Clark and Floyd Counties*		
Annual Averages	*Total Nonfarm Employment*	*Manufacturing Employment*	*Unemployment Rate (%)*	*Total Nonfarm Employment*	*Manufacturing Employment*	*Unemployment Rate (%)*
1978	394,800	110,000	5.2	44,800	12,100	N/A
1979	402,700	109,400	5.2	46,800	12,100	6.3
1980	391,700	100,300	7.9	47,400	11,900	8.3
1981	383,400	96,500	9.6	47,800	12,200	10.6
1981: Q1-Q3	386,700	99,200	8.3	48,200	12,300	9.7
1982: Q1-Q3	371,000	87,200	11.4	44,000	10,500	13.0
Quarterly Averages						
1982:						
Q1	378,300	91,900	10.9	43,400	10,500	14.2
Q2	369,500	86,400	12.1	44,600	10,600	13.1
Q3	365,300	83,300	11.1	44,100	10,500	11.7

*The employment data refer to establishments located within the area cited; the unemployment data refer to residents of the area. All data except the Clark and Floyd employment statistics are seasonally adjusted.
#Includes Floyd and Clark counties in Indiana, and Jefferson, Oldham, and Bullit counties in Kentucky.
SOURCES: Indiana Employment Security Division; Kentucky Department for Human Resources.

in 1981 and nearly 800 in 1979. In the three counties combined, permits were issued for 460 apartment units and 20 condominium units during the first nine months of 1982. The comparable statistics for the preceding year were about 550 apartment units and nearly 500 condominiums, with the latter being the peak for condominium building.

Available indicators of consumer spending show less severe declines in this area. Reports on retail sales are mixed. In general they suggest that sales have been holding steady or declining slightly in current dollars—but that means a definite fall after adjusting for price increases.

Motor vehicle sales remained depressed through the summer months. During the first three quarters of 1982, sales of new cars in Clark, Floyd, and Jefferson counties declined nearly 13 percent from the preceding year's low levels, and light truck sales declined by more than 8 percent. Used car sales through dealers—who have been losing more and more of the used-car market to private party transactions—rose slightly during this period. Banks and savings and loan associations report a significant rise in consumer loan delinquencies and increased foreclosures on mortgages.

While most of the local economic picture remains gloomy, there have been some encouraging signs of late. As mortgage interest rates have fallen in recent weeks, real estate activity has picked up. In Jefferson county, for example, more than twice as many real estate sales were reported closed during the first half of November as in the first half of September or October. Automobile sales rose each month during the September to November period. And although local unemployment rates were still painfully high during the third quarter of this year—11.7 percent in Clark and Floyd counties and 11.1 percent in Jefferson county (both seasonally adjusted)—these rates represent a decided improvement over the 12 to 15 percent peaks that occurred between November 1981 and April 1982.

These signs permit us to be slightly optimistic about the local economy in the near future. There should be modest gains, particularly in the housing and consumer sectors during the next several months, with more noticeable strengthening around the middle of 1982. As usual, rising employment will tend to lag behind the general recovery timetable, especially manufacturing employment, which fell much farther than in the 1975 recession and will not regain its 1978 level in the foreseeable future. Similarly, unemployment rates can be expected to remain high for the next several months but should show definite improvement by the second or third quarter of 1983.

KOKOMO–MARION

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Overall, the performance of the Kokomo-Marion region's economy during the first ten months of 1982 could be described as weak. Unemployment rates remained considerably higher than the national, and in some cases, the state, average. High unemployment rates were caused by production cutbacks and/or permanent closings of some of the major plants in the area. The Kokomo metropolitan area's unemployment rate remained highest in the state in four of the first ten months of 1982.

In Kokomo, as of November 1982, 40 percent of workers at Chrysler, 30 percent at Delco, 30 percent at Continental Steel, and 15 percent at Cabot remained on indefinite layoffs. Similarly, in Marion, more than 50 percent of workers at the St. Regis and Dana plants, and between 10 to 15 percent of employees at the Fisher Body, RCA, General Tire, and Foster Forbes plants remained on indefinite layoffs. The Owens-Illinois, Essex, RCA, Crofton, Kroger, and Spector Red Ball companies will all have their doors closed permanently before the end of 1982.

Despite high joblessness, a battered housing market, and low retail sales, the business community remained bullish on the economic future of the area. Plant expansion, plant modernization, business renovation, and other construction projects totalling $72 million were completed in the first ten months of 1982 in the Kokomo-Marion area. In addition, plant expansion and modernization projects and business renovation projects worth $278 million have already been announced for the following year. It includes a $130 million modernization plan at Kokomo's Delco plant and a $125 million expansion plan at Kokomo's Chrysler plant. Moreover, both in Kokomo and in Marion, small retail businesses lost during the year were replaced with new ones at a fast pace.

SOMBER OUTLOOK FOR 1983

The question now remains: Is the economic sun going to shine brightly over the skies of the Kokomo-Marion area in 1983? The economic fortune of the Kokomo-Marion area is closely tied to the national trends in the auto, steel, transportation, housing, and heavy industries. A careful study of both current and prospective trends in these and related industries suggests that the economic recovery will not be strong enough to keep local plants working to their full capacity, to enable major plants to recall a majority of their laid-off employees, and to enable consumers to unabashedly increase their demands for autos, homes, and other big-ticket products.

The economic growth in the Kokomo-Marion area in 1983 will remain gradual and mild due to a mild recovery at the national level and a slow recovery in the world economy. The unemployment rates in the area will remain in double digits and well above the national and state averages. The unemployment rate in the Kokomo area may surpass the 20 percent mark before it starts declining. The labor force in the area will remain relatively stable.

In summary, for the third year in a row, the Kokomo-Marion area's economy will remain weak in 1983. The economic sun will not shine brightly over the skies of the Kokomo-Marion area. Economic hardship will continue for many jobless people and also for people with low incomes and little or meager salary increases. The people of Kokomo, Marion, and the surrounding areas will have to look beyond 1983 for a strong and a spectacular economic turnaround.

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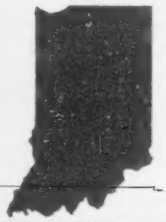

Indiana Business Review

Volume 58 January-February 1983

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Housing in Indiana: 1980 Census Findings

In this issue . . .

The appearance of 1980 Census data is a cause for some excitement, but the limited distribution of those data has reduced the potential utility of the information. Ron Headings offers selected data from the housing portion of the Census with a focus on ownership information. Space limitations reduce the amount of information this publication can carry, but further analysis of Census data will be made in these pages in coming months.

Three graduate assistants who normally put the numbers together for **Indiana's Business** offer a review of the year just past—by many measures, one of poor performance. This review of 1982 permits us to consider the magnitude of improvement necessary to achieve new high points comparable to those of previous times.

Morton J. Marcus
Editor

INDIANA BUSINESS REVIEW

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Ronald L. Headings

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Of the 1.9 million occupied housing units in Indiana in 1980, 1.4 million, or about 72%, were occupied by their owners; the remaining 28% were rented. These findings from the 1980 Census of Housing confirm that housing patterns in Indiana have been generally stable in the past decade. The percentage of residences which are owner occupied has changed by less than one-tenth of one percent since 1970, from 71.655% to 71.712%. Some individual counties, however, did experience a significant change in the proportion of owner-occupied housing units. Hancock County showed an increase of almost seven percentage points—from 72.5% to 79.1% between 1970 and 1980; in Dubois County, a decrease of four percentage points occurred over the same period.

Although trends are generally stable, counties vary enormously in their owner-occupancy rates. In 1980, Crawford County had the highest rate—86%. The large student population in Monroe County places it at the other extreme, with only 56% of the housing units being occupied by their owners. Details for individual counties appear in the accompanying Table.

Seventy-four percent of the housing units occupied by whites are owned by the resident. Blacks own only about 50% of the housing units they occupy in the state.

The ownership percentage figures for Indiana have been remarkably stable even when broken down by race, but several counties incurred significant changes during the '70s. Blacks made large gains in percentage of ownership in Miami and Lake Counties, but lost more than 15 percentage points in Vigo and Orange Counties. The figures pertaining to whites for the change in percentage of ownership in specific counties are almost identical to the statistics for the population as a whole.

Indiana's 1.9 million owner- or renter-occupied residences accounted for 93% of the total of 2.1 million units in 1980. This percentage varied greatly for individual counties, however. Hendricks County boasts the highest occupancy rate of just over 96%. Only two Indiana counties did *not* show occupancy of 87% or greater—Kosciusko at 85% and Brown at 76%. These figures are attributable to the large number of vacation dwellings found in these two counties.

Over 5.3 million Indiana residents lived in facilities designated as housing units in 1980. According to the U.S. Department of Commerce, a housing unit is "a house, an apartment, a group of rooms or a single room . . . intended for occupancy as separate living quarters." Boats, tents, vans and even caves are included in these statistics if they are "someone's usual place of residence." The balance of the population lived in group quarters (dorms, nursing homes, etc.). This means that the average number of persons per housing unit in Indiana was 2.77 (mean value). Lagrange led all counties in that category with 3.26 occupants per unit. Other counties with more than three persons per home were Franklin, Adams, Jasper, Hancock, Morgan, and Scott. At the lower end of the spectrum was Monroe County where, on the average, only 2.47 people shared each housing unit. Monroe is followed closely by Vanderburgh and Knox Counties, where the number of residents per unit was 2.55 and 2.57, respectively.

Between 1970 and 1980 the total number of occupied housing units in the state rose from 1.6 million to 1.9 million, a 20% increase. The population of Indiana, however, grew by less than 6% during the decade. Hamilton County was by far the fastest growing in terms of both occupied residences and population; it had 66% more occupied units and 50% more people in 1980 than it did in 1970. Benton County demonstrated the slowest growth in the number of occupied housing units, just over 5%, while its population decreased 9% during the ten-year period. In counties where the percentage of occupied units increased by more than the population, the number of persons per unit went down.

The number of vacant housing units

available for sale or for rent in Indiana was 72,439 in 1980, a 26% increase from 1970. Ohio County showed the largest increase in vacancies available, 217% in the ten-year census interval. It became more difficult, apparently, to find housing in Vermillion County, where the number of vacancies available declined by approximately 46%.

The number of units available for purchase or rental was not the same as the number of housing units that were vacant. In fact, statistics indicate that in some counties only a very small portion of the vacant units were actually available for new residents. In Brown County, with its many vacation homes, only 9% of unoccupied living quarters were for sale or rent, yet the county had the highest rate of unoccupied housing units—23% of the total. At the other extreme is a county adjoining Brown—Johnson—where 77% of the vacant units were available. The figure for the entire state was just over 53%.

Hamilton County showed the largest increase in total owner-occupied units—72%—while Vigo County had only 8% more than it did in 1970. The total number of renter-occupied housing units actually decreased during the '70s in a handful of Indiana counties. Rush County claimed the largest reduction of 10%. Alternatively, three counties increased renter-occupied residences by more than 50%—Brown at 72%, Porter at 68%, and Dubois at 61%. The increase for the entire state was 19%.

Although this brief analysis produced few surprises in its characterization of particular counties and the state as a whole, it does indicate a certain stability of housing status. Clearly, Indiana has been able to maintain a certain standard of ownership through a decade of unpredictable and often disappointing economic conditions.

Note: Additional details on housing characteristics are available from publications of the U.S. Bureau of the Census at State Data Center affiliates throughout the state or through INDIRS terminals. For more information call the State Data Center at the Indiana State Library, 317-232-3733.

Indiana Housing Statistics, by County

	Percentage Change in Housing Units, 1970-1980	*Percentage Change in Population, 1970-1980*	*Percentage of Housing Units Owned by the Occupant*	*Persons Per Housing Unit (Mean Value)*
Indiana	**19.7**	**5.7**	**71.7**	**2.8**
Adams	20.6	10.2	81.2	3.1
Allen	21.8	4.9	71.3	2.8
Bartholomew	31.0	14.1	75.0	2.8
Benton	5.4	−9.3	73.2	2.8
Blackford	8.1	−2.0	80.2	2.8
Boone	28.0	18.1	75.1	2.8
Brown	56.8	36.7	81.5	2.8
Carroll	20.7	11.2	77.8	2.8
Cass	13.3	1.2	76.5	2.7
Clark	33.4	17.1	69.9	2.8
Clay	11.5	3.9	81.3	2.7
Clinton	11.5	3.3	72.7	2.7
Crawford	31.0	22.2	85.6	2.8
Daviess	15.5	4.6	78.0	2.8
Dearborn	27.3	16.5	79.3	3.0
Decatur	15.0	4.9	76.7	2.9
Dekalb	20.8	9.0	82.6	2.9
Delaware	13.3	−0.5	69.9	2.7
Dubois	30.4	10.7	80.2	3.0
Elkhart	22.5	8.5	73.8	2.8
Fayette	19.9	7.8	72.3	2.8
Floyd	22.1	10.0	73.4	2.8
Fountain	15.3	4.3	76.3	2.7
Franklin	25.6	15.8	79.5	3.2
Fulton	25.7	13.8	80.1	2.7
Gibson	20.6	8.9	79.1	2.7
Grant	9.9	−3.6	72.7	2.8
Greene	21.3	13.1	82.7	2.6
Hamilton	65.7	50.4	77.9	3.0
Hancock	34.1	25.2	79.1	3.0
Harrison	46.3	33.6	85.2	3.0
Hendricks	40.9	29.3	83.3	3.0
Henry	13.1	1.4	76.8	2.8
Howard	18.6	4.4	74.0	2.8
Huntington	11.7	1.8	77.6	2.8
Jackson	22.4	10.1	80.4	2.8
Jasper	42.1	27.9	76.0	3.0
Jay	6.7	−1.4	80.0	2.8
Jefferson	30.4	12.6	75.4	2.8
Jennings	35.3	17.5	82.4	3.0
Johnson	45.9	26.3	76.2	2.9
Knox	13.1	0.7	73.2	2.6
Kosciusko	35.6	23.7	78.4	2.8
Lagrange	33.3	22.3	82.5	3.3
Lake	9.4	−4.3	67.6	3.0
LaPorte	18.0	3.1	74.1	2.8
Lawrence	23.4	11.7	81.5	2.7
Madison	13.1	0.6	74.9	2.7
Marion	13.3	−3.4	59.1	2.6
Marshall	23.8	11.9	79.1	2.8
Martin	15.1	0.3	79.9	2.8
Miami	14.4	1.5	70.2	2.8
Monroe	35.6	16.4	56.3	2.5
Montgomery	17.4	4.6	74.2	2.7
Morgan	33.0	17.7	79.0	3.0
Newton	35.1	27.9	76.5	2.9
Noble	24.4	12.9	79.4	2.9
Ohio	32.0	19.2	78.2	2.8
Orange	21.3	10.1	81.7	2.7
Owen	41.3	30.2	83.4	2.8
Parke	20.6	12.1	81.0	2.7
Perry	17.5	1.4	82.6	2.8
Pike	17.5	9.6	82.9	2.6
Porter	59.0	37.5	76.3	3.0
Posey	34.6	21.5	77.9	2.9
Pulaski	17.8	5.8	79.5	2.8
Putnam	19.7	8.3	78.8	2.8
Randolph	11.0	3.7	77.5	2.8
Ripley	27.1	15.4	79.7	2.9
Rush	6.2	−3.7	72.8	2.9
St. Joseph	13.9	−1.4	73.9	2.7
Scott	31.1	19.1	81.1	3.0
Shelby	16.4	5.5	76.5	2.9
Spencer	26.9	13.0	80.8	2.9
Starke	26.6	14.1	80.2	2.9
Steuben	35.6	22.5	80.4	2.7
Sullivan	13.5	6.1	81.7	2.6
Switzerland	19.6	13.4	80.4	2.8
Tippecanoe	26.1	11.3	59.8	2.6
Tipton	12.0	1.0	78.0	2.8
Union	14.9	4.2	72.9	2.8
Vanderburgh	16.9	−0.7	65.9	2.6
Vermillion	15.1	8.6	81.6	2.6
Vigo	10.0	−1.9	71.3	2.6
Wabash	15.9	3.1	74.9	2.8
Warren	11.9	3.1	76.0	2.9
Warrick	60.0	48.3	82.1	3.0
Washington	24.5	13.8	82.7	2.9
Wayne	8.7	−3.9	69.5	2.7
Wells	17.5	6.6	80.2	2.8
White	28.0	13.7	77.9	2.7
Whitley	24.2	12.1	83.9	2.9

Indiana's Business

1982: The Year in Review

Dan Borochoff, Brian Burden, and Pat Klingaman

Research Assistants, Division of Research, Indiana University Graduate School of Business

Although 1982 ended with signs of economic improvement in both the nation and the state, annual averages and year-to-year comparisons showed that 1982 was a year in which the Hoosier state did not make many economic advances. Most indicators of the economy of Indiana were at a lower point by the end of 1982 than they had been in either 1981 or in several previous years.

Production

Indiana's manufacturing production index, which combines a number of production factors such as manufacturing man-hours and industrial electricity sales, showed a slight decline in 1982. The December 1982 index was 129.2, down 2.3 percent from December 1981. The index has fallen a total of 18.5 percent since the same period in 1978, when the index stood at 158.5.

Few industries have been hit harder by the economic downturn than steel. (And 1982 production figures give little cause for optimism.) Indiana's annual raw steel production slipped from 22.7 million net tons in 1981 to 16.5 m.n.t. last year, a 27.3 percent decline. Indiana's production drop was far less dramatic than that of the country as a whole, however. United States steel figures for 1982 show a 39.2 percent dip in production since 1981, from 119.9 to 72.9 million net tons. The rate of capability utilization in U.S. steel mills declined from 77.7 percent in 1981 to 47.7 percent last year.

Indiana, the nation's leading steel producer, has steadily increased its share of the nation's total steel production. In 1979, Indiana steel mills produced 16.9 percent of the nation's raw steel output. During 1982, that percentage rose to 22.6.

Indiana Business Indicators, 1978-1982
(Data are for December, unless otherwise noted)

	1982	*1981*	*1980*	*1979*	*1978*
Employment					
Nonagricultural Employment (000's)	1981.4	2068.9	2136.3	2225.8	2232.0
Manufacturing Employment (000's)	549.0	616.8	655.5	699.6	752.7
Average Weekly Hours (number)	39.9	39.9	41.7	40.9	41.9
Average Weekly Earnings ($)	396.21	384.64	378.64	330.06	316.35
Nonmanufacturing Employment (000's)	1426.0	1447.7	1476.7	1509.6	1476.0
Unemployment Rate (%)	12.5	11.8	8.2	7.8	6.0
Continued Unemployment Claims	560.6	411.3	391.7	296.7	128.5
Production					
Industrial Electricity Sales	146.1	150.6	170.5	108.0	176.9
Manufacturing Production	129.2	132.2	148.5	146.5	158.5
Raw Steel Production–Indiana (year-to-date totals, in million net tons)	16.5	22.7	19.8	22.9	24.4
Raw Steel Production–U.S. (year-to-date totals, in million net tons)	72.9	119.9	112.1	135.9	136.7
Raw Steel Production–Indiana % of U.S. Total	22.6	18.9	17.7	16.9	17.8
Construction					
Construction Activity–Total	198.8	168.7	218.2	279.6	477.2
Residential Housing Starts	98.8	59.6	109.4	79.8	116.1
Residential Expenditures	212.8	183.0	262.0	333.6	392.8
Nonresidential Expenditures	185.0	194.8	245.1	223.9	183.3
Public Works and Utilities	209.9	110.1	121.0	307.5	1065.3
Other Indicators					
Passenger Car Registrations: January-November (year-to-date total, in thousands)	144.5	171.3	181.2	235.9	256.7

Construction

Most indicators of construction activity showed signs of improvement in 1982, especially during the latter months. Indiana's December index for total construction activity was up 17.8 percent over December 1981, jumping from 168.7 to 198.8. Unfortunately, the 1982 figure still represents a 58.3 percent drop from the 1978 index of 477.2.

Residential housing starts ended 1982 with a strong surge of new housing construction; the December index stood at 98.8, up from 52.9 in November 1982 and 59.6 in December 1981. In terms of annual housing starts, however, 1982 did not compare so well with 1981. Only 14,718 dwelling units were started in Indiana last year, compared to 19,839 in 1981.

Indiana's residential construction expenditures index rose 16.3 percent in 1982, from 183.0 in December 1981 to 212.8 in December of last year. The index is still down 45.8 percent from the December 1978 level of 392.8.

Non-residential expenditures was the only December construction index that failed to exceed the 1981 level, dropping 4.9 percent, from 194.8 to 185.0. However, the 1982 figure is above the December 1978 index of 183.3.

Public works and utilities construction fared considerably better in 1982 than in 1981. The 1982 index stood at 209.9 in December, up 90.6 percent from the 1981 index of 110.1 but far below the 1978 December index of 1065.3.

Car Registrations

The figures for registrations of new passenger cars purchased by Indiana residents showed a continued downward trend in 1982. Only 144,500 new automobiles were registered in Indiana during the first eleven months of 1982–down 15.6 percent from the same time period in 1981. Registrations have declined 43.7 percent since

1978, when January through November registrations totaled 256,700.

Employment

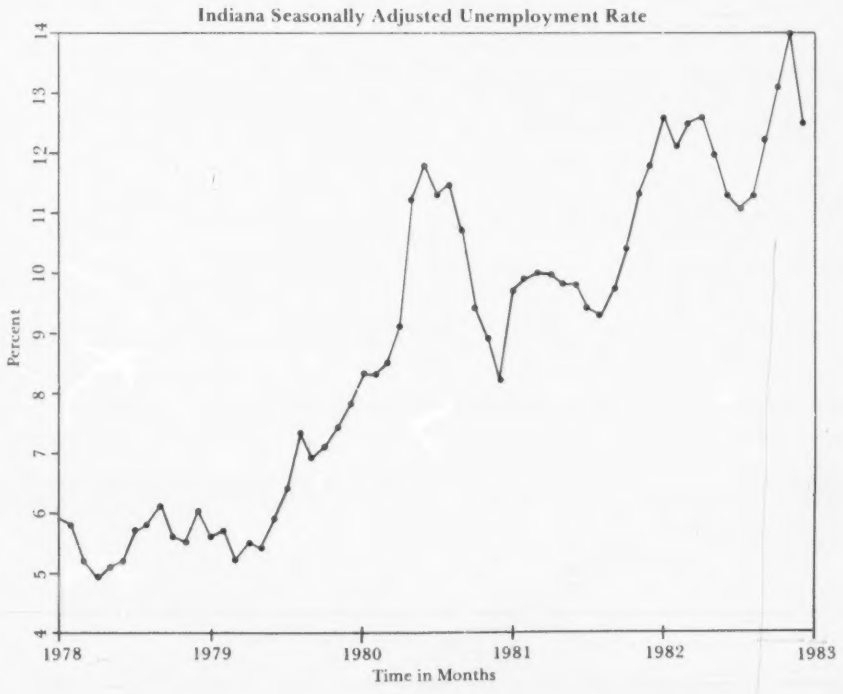
Non-agricultural employment as of December 1982 declined 4.2 percent from December 1981. The figure of 1,981,400 employed was down 250,600 from the December 1978 peak; the drop represents a job loss of 11.2 percent.

The 4.2 percent drop in statewide employment from December 1981 to December 1982 was mainly attributable to an 11 percent decrease in employment at manufacturing establishments. This loss in the manufacturing sector was due largely to a 14.5 percent decrease in jobs in durable production; jobs in nondurable production decreased 2.7 percent in the same period. The largest reductions in manufacturing employment were found in the following sectors: primary metals, which lost 16,600 jobs (down 17.4 percent), electrical machinery, which lost 14,400 jobs (down 14.8 percent), nonelectrical machinery, which lost 14,000 jobs (down 19.9 percent), and transportation equipment, which lost 11,400 jobs (down 14.5 percent). Manufacturing employment had declined by 203,700 jobs—or 27.1 percent—since the December 1978 peak.

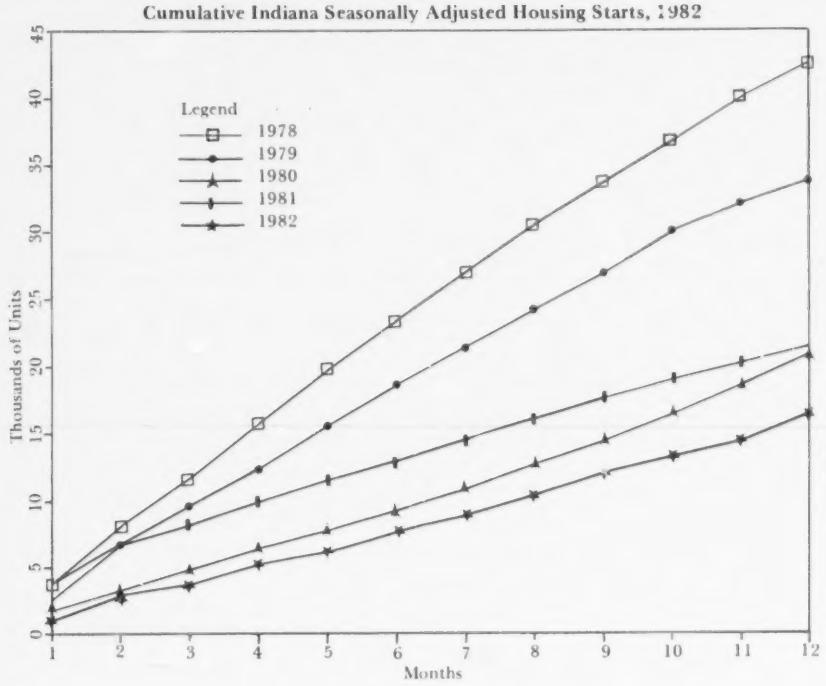
Statewide employment at nonmanufacturing establishments has suffered only slightly from the recent recession. Nonmanufacturing employement did not start falling until 1980, whereas employment in the weaker manufacturing sector started its current descent in 1979. The 82,700 nonmanufacturing jobs which have been discontinued since peak employment in 1979 represent only a 1.8 percent annualized decline. Nonmanufacturing employment fell only 1.4 percent from December 1981 to December 1982, a loss of 20,800 jobs. Almost half of these lost jobs (10,300) were in wholesale and retail trade.

Hours

The average number of hours worked per week at Indiana manufacturing establishments is very nearly the same as the



Cumulative Indiana Seasonally Adjusted Housing Starts, 1982



average for the entire United States. Statewide average number of weekly hours worked in December 1982 was 39.9, the same as it was in December 1981, whereas nationwide average weekly hours declined from 39.9 to 39.7. Most sectors of the Indiana economy showed little change in the past year. The greatest change was found in electrical equipment for autos, aircraft, and railroads, where average weekly hours increased from 32.4 in December 1981 to 38.5 in December 1982.

Weekly Earnings

Indiana's average weekly earnings at manufacturing establishments has been declining in real dollars since 1980. In actual dollars, average weekly earnings rose $11.57 between December 1981 and December 1982, but in C.P.I.-adjusted dollars, earnings declined 78 cents. Statewide average weekly earnings have not been keeping pace with the rest of the country. While Indiana's average weekly earnings decreased during the past year, U.S. average weekly earnings increased $1.12 in real terms.

U.S. and Indiana Man-Hours in Industrial Production
(Seasonally Adjusted Data)

	United States (Millions)				*Indiana (Thousands)*			
			Percent Change From:				*Percent Change From:*	
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Manufacturing	December	713.8	0.2	−6.8	December	21797.0	2.3	−11.0
Food	December	62.7	−3.6	−3.4	December	1427.9	−5.5	−6.6
Apparel and Textiles	December	67.4	−0.1	−7.8	December	369.1	0.0	−4.7
Lumber and Wood	December	23.5	0.1	3.1	December	563.0	−1.9	−7.4
Furniture	December	16.6	1.0	−5.9	December	631.1	−2.5	−11.9
Paper	December	27.2	0.0	−4.8	December	484.6	−3.9	−8.1
Printing	December	47.9	1.9	2.9	December	1114.7	0.1	2.2
Chemicals	December	41.5	−2.0	−5.2	December	1228.4	−3.6	−2.8
Petroleum and Products	December	9.0	−1.8	2.3	December	198.0	4.6	8.4
Rubber and Plastics	December	26.6	−0.3	−4.8	December	1130.6	0.2	1.5
Stone, Clay and Glass	December	21.3	−5.6	−9.7	December	734.9	−2.8	−7.6
Primary Metals	December	30.5	−1.1	−26.0	December	2950.2	4.4	−18.8
Fabricated Metals	December	54.5	1.3	−12.9	December	1825.0	−0.3	−10.6
Nonelectrical Machinery	December	85.4	5.4	−18.2	December	2138.8	−1.2	−23.4
Electrical Machinery	December	76.4	−0.5	−5.8	December	3136.2	−2.5	−12.7
Transport Equipment	December	68.3	1.7	−7.7	December	2615.5	0.1	−9.8

Unemployment Rate

The unemployment rate at year's end in Indiana continued to compare unfavorably with the nation's. The state's 12.5 percent unemployment rate almost made the U.S. rate of 10.8 percent seem not so bad in comparison. Continued unemployment claims have risen to 560,000 in December 1982, a 36.3 percent increase from December 1981. On the bright side, Indiana's unemployment picture has improved significantly since November 1982 when the unemployment rate was 14.0 percent and there were 85,400 more continued unemployment claims.

Industrial Electricity Sales

Industrial electricity sales are a measure of industrial activity and an economic indicator. In Indiana this indicator has been declining, but at a decreasing rate, since 1980. Industrial electricity sales for December 1982 declined only 3 percent from December 1981; from December 1980 to December 1981 they had declined 11.7 percent. The December 1982 industrial electricity sales increased from the prior month at a seasonally adjusted annualized rate of 17 percent (144.2 to 146.1).

Variations in industrial electricity sales were found in different regions of the state. From December 1981 to 1982, twenty-two Indiana cities had decreased industrial electricity sales and thirteen cities showed an increase. Several Indiana cities have experienced large production slowdowns and layoffs which have affected the industrial electricity sales figures. Jeffersonville and Logansport registered decreases of 25 percent in industrial electricity sales over the past year. East Chicago and Elkhart experienced about a 20 percent decline in industrial electricity sales in the same period.

Fort Wayne and Marion, however, ended 1982 at roughly the same levels of sales as year end 1981 because of less severe production slowdowns and layoffs. Industrial activity increased in some cities, including Hammond, Indianapolis, and Marion, which had less than a 5 percent increase in electricity sales from 1981 to 1982; Vincennes and Connersville reported increases in industrial electricity sales of 11.11 percent and 12 percent, respectively, in the same period.

Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

City	*December 1982*	*November 1982*	*One Year Ago*	*Percent Change From: Last Month*	*One Year Ago*
Anderson	19.3	19.3	20.6	0.00	−6.31
Bedford	11.9	11.4	11.0	8.18	8.18
Bloomington	4.0	4.0	4.3	0.00	−6.97
Columbus	14.9	15.3	15.4	−2.61	−3.25
Connersville	8.4	8.7	7.5	−3.45	12.00
Crawfordsville	10.4	11.7	10.6	−11.11	−1.88
East Chicago	18.2	19.5	22.7	−6.66	−19.82
Elkhart	17.7	14.4	22.4	22.91	−20.98
Evansville	40.9	46.2	41.1	−11.47	−0.49
Fort Wayne	39.8	39.1	39.8	1.80	0.00
Frankfort	7.7	8.4	8.2	−6.10	−6.09
Gary	161.0	152.0	164.0	5.92	−1.83
Goshen	8.3	8.8	7.8	−5.68	6.41
Hammond	54.0	54.2	52.5	−0.37	2.85
Huntington	4.7	4.2	4.3	1.19	9.30
Indianapolis	325.7	314.3	320.0	3.63	1.78
Jeffersonville	4.5	4.7	6.0	4.25	−25.00
Kokomo	45.5	61.2	57.2	−25.65	−20.45
Lafayette	38.5	36.6	37.0	5.19	4.05
LaPorte	11.6	12.5	14.0	−7.2	−17.14
Logansport	7.1	9.3	9.5	−23.65	−25.26
Madison	2.5	2.5	2.4	0.00	4.16
Marion	25.6	29.6	25.4	−13.51	0.79
Michigan City	16.4	16.6	42.6	−1.20	−61.50
Mishawaka	8.0	7.2	N/R	11.11	N/R
Muncie	10.2	11.5	11.8	−11.30	−13.55
New Albany	4.7	4.7	4.7	0.00	0.00
New Castle	6.5	5.9	6.4	10.17	1.56
Peru	4.6	4.9	4.9	−6.12	0.00
Richmond	21.0	24.2	22.3	−13.22	−5.82
Seymour	2.3	2.2	2.2	4.54	0.00
South Bend	25.6	26.4	28.0	−3.03	−8.57
Terre Haute	26.4	25.0	27.4	5.60	−3.65
Valparaiso	8.0	8.6	8.7	−6.97	−8.05
Vincennes	3.0	2.9	2.7	3.45	11.11
Wabash	5.9	6.0	6.3	−1.66	−6.35
Indiana	**1,663.2**	**1,665.2**	**1,005.3**	**−0.12**	**65.44**

United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967 = 100)

		United States				*Indiana*		
Employment	*Latest Month*		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Nonagricultural Employment	December	134.5	134.8	137.8	December	111.5	111.2	116.4
Manufacturing Employment	December	93.2	93.5	101.2	December	76.7	77.3	86.1
Average Weekly Hours (number)[2]	December	39.7	39.3	39.9	December	39.9	39.3	39.9
Average Weekly Earnings ($)[2]	December	344.99	338.37	329.97	December	396.21	385.93	384.64
Nonmanufacturing Employment	December	151.8	151.8	153.2	December	134.5	134.4	136.4
Unemployment Rate (%)	December	10.8	10.7	8.6	December	12.5	14.0	11.8
Unemployment–Married Males (%)	December	7.8	7.6	5.7	–	–	–	–
Continued Unemployment Claims	–	–	–	–	December	560.6	646.0	411.3
Production								
Bituminous Coal Production	November	131.3	138.4	156.3	–	–	–	–
Industrial Electricity Production	September	130.3	132.9	149.2	–	–	–	–
Industrial Electricity Sales	–	–	–	–	December	146.1	144.2	150.6
Manufacturing Production	December	133.9	134.0	142.0	December	129.2	127.7	132.2
Raw Steel Production	December	42.2	45.2	72.9	December	73.5	77.1	101.6
Construction								
Construction Activity–Total	November	302.6	292.2	293.4	December	198.8	195.3	168.7
Residential Housing Starts	December	95.1	109.3	68.6	December	98.8	52.9	59.6
Residential Expenditures	November	308.8	291.9	300.0	December	212.8	193.7	183.0
Nonresidential Expenditures	November	304.9	297.6	295.4	December	185.0	189.4	194.8
Public Expenditures	November	205.8	200.0	202.2	–	–	–	–
Public Work and Utilities	–	–	–	–	December	209.9	214.2	110.1
Other Indicators								
Personal Income Per Capita ($)	October	11216.00	11164.30	10782.60	1982:2	9929	9887	9520
Passenger Car Sales (thousands)[2]	December	632.0	743.0	523.0	–	–	–	–
Year to Date (thousands)	December	7980.0	7348.0	8536.0	–	–	–	–
Passenger Car Registration (thousands)	–	–	–	–	November	14.5	13.1	11.3
Year to Date (thousands)	–	–	–	–	November	144.5	130.0	171.3

[1] Current indicators are preliminary and subject to revision.
[2] Not seasonally adjusted

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Indiana Business Review

Volume 58 March 1983

Morton J. Marcus **The Age Distribution of Indiana's Population**

Patrick Klingaman **Indiana's Economy in Early 1983**

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The Age Distribution of Indiana's Population

In this issue . . .

The people of Indiana, their numbers and characteristics, will determine the future of the state. The report in these pages, prepared in part with support from the Indiana Department of Commerce, presents the basic demographics of our ninety-two counties. The numbers of persons, by age, are the most fundamental force shaping the course for the state. In these pages we continue to report basic data from the 1980 Census to extend the audience for such data and provide some elementary analysis of the results. Those interested in additional detail on the age distribution of the population should contact the Indiana State Data Center or the State Library (812-232-3733).

We are indebted to Kate Wentzell for statistical assistance in the preparation of the report. The graphics were prepared from special programs designed and implemented by Richard Brandt.

In addition, this issue carries a search by Patrick Klingaman for signs of the upturn in the state's economy. The fact of the upturn has been accepted; we are at this point waiting through the usual data lag for the statistical proof.

Morton J. Marcus

Indiana Business Review

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Morton J. Marcus

Research Economist, Division of Research, Indiana University Graduate School of Business.

Indiana's population grew by nearly 300,000 persons from 1970 to 1980, but that growth was not distributed equally across the state either geographically or with respect to age. The youngest groups declined in numbers of persons, while the older groups increased. Thus, the population of the state aged during the decade from a median figure of 27.2 years in 1970 to 29.2 years in 1980.

Young persons under 15 years of age declined in numbers by nearly 224,000, or 14.6%, for the decade. The number of young adults increased by more than 131,000 (14.3%). Adults aged 25 to 64 also increased; their numbers rose by nearly 298,000 (13.2%), while the population 65 and over gained by nearly 92,000 (18.5%). The social and economic implications of these statistics for the decade and for many years into the future are clear. The baby boom (persons born between 1946 and 1961 and reaching the ages of 19 through 34 in 1980) was already part of the labor force during the decade, with the leading edge well-established as citizens, workers, and homeowners. The smaller size of the group behind them, which was still in school, reduced some of the pressures on the strained resources of academic institutions. The population pyramid for the state (**Figure 1**) shows the bulge of 15-to-24-year-olds that entered the marketplace as a dynamic force in the 1970s. The same group, given economic opportunities, will be a strong force in the housing market for the decade ahead.

Whereas in 1970, Hoosier children under age 15 represented 29.5% of the state's population, this share had shrunk to 23.8% by 1980. The age cohort 25 to 44 increased from 23.5% of the 1970 total to 27.1% of the 1980 total. Compared to the cohort ahead of it, those 45 to 64, there were 426,000 more persons coming into middle-aged maturity. This means that, mortality and migration aside, the group of 25- to 44-year-olds in 1980 represented a 40% increase in numbers over their chronological predecessors born in the previous twenty years. Details of the age distribution of Indiana's population in 1980 are provided in **Table 1**.

Among Indiana's ninety-two counties, Sullivan had the distinction of having the highest median age in 1980 at 33.7 years. The median age indicates that one-half of the population of the county was older than the given number of years, and one-half was younger. The lowest median ages were in Monroe and Tippecanoe Counties, both at 24.6 years. Of the non-college counties, Lagrange was lowest at 26.0 years. Specific median ages and ranks in the state for each county are shown in **Table 2**.

Youths 17 and Younger

More than 29% of Indiana's 1980 population was under age 18. In Monroe, Tippecanoe, Vigo, and Delaware Counties the percentage of the population below age 18 was quite low because each of those counties is home to a major state university and hence a center for young adults age 18 to 24.

Lagrange County led the state with 37.2% of its population in the 17-and-younger group. In second place was Franklin County at 34.2%, followed by Adams at 34.0%. These three counties alone had more than a third of their populations in this youthful category. County-by-county detail is provided in **Table 2**. **Figure 2** presents the percentage of population 17 and younger in map form. For graphic display purposes, the state is divided into four groups of twenty-three counties each. From this map we observe that high percentages of young persons are concentrated in the southeastern counties of Indiana, with lesser concentrations in the northeastern and the northwestern corners of the state. The lowest concentrations of youngsters are found in a band of counties along the western boundary of the state stretching from Vanderburgh County north to Vermillion, Fountain, and Tippecanoe Counties.

Persons 65 and Older

Precise symmetry is not found in the map (Figure 3) of counties arranged in terms of percentage of population 65 and older. The western band of counties, except for the two college counties (Vigo and Tippecanoe), has a high percentage of people 65 and older. The aging population is found heavily represented in rural Benton, White, Pulaski, and Fulton Counties, with scattered additional pockets in Orange and Crawford plus Ohio and Switzerland. The lowest representations of this older population are found in six of the eight counties including or surrounding metropolitan Indianapolis, and in the rapidly growing Clark and Harrison counties, plus the urban fringe represented by Lake, Porter, and Jasper Counties.

The greatest percentage of population 65 and older was found in Sullivan County (16.4%), followed closely by Greene at 16.1%. The lowest percentage was recorded by Porter County at 6.9%. Table 2 again carries the detailed data.

Dependency Ratios

For want of a better term, students of population have defined the combined populations of those under 18 and over 65 divided by the number of those in the 18-to-64 age group as a "dependency ratio." This number gives a statement about the extent to which the population normally, or formerly, considered to be of working age bears responsibility for a population presumed to be dependent. Many in the 18-to-64 age group do in fact support those in the younger and older groups, but we have extended education (and hence dependency) for many young people into their early twenties. Therefore, dependency ratios for college counties are deceptively low.

In today's world, where age is becoming less of a test for employment, inclusion of the over-65 population in the

Table 1

Indiana Population by Sex and Age, 1980

	1980 Population			*Percent of Population*			*Change From 1970*	*Percentage Change*
	Male	*Female*	*Total*	*Male*	*Female*	*Total*	*Total*	*Total*
Children, 0-14 Years	669201	637444	1306645	25.10	22.57	23.80	−223958	−14.62
Under 5 Years	214955	203809	418764	8.06	7.22	7.63	−36912	−8.09
Under 1 Year	45834	43371	89205	1.72	1.54	1.62	−2855	−3.09
1-4 Years	169121	160438	329559	6.34	5.68	6.00	−34057	−9.36
5-14 Years	454246	433635	887881	17.04	15.35	16.17	−187046	−17.39
5-9 Years	221919	211134	433053	8.32	7.48	7.89	−95971	−18.13
10-14 Years	232327	222501	454828	8.72	7.88	8.28	−91075	−16.67
Young Adults, 15-24	523613	524676	1048289	19.64	18.58	19.09	131325	14.32
15-19 Years	266689	262939	529628	10.00	9.31	9.65	27388	5.45
15-16 Years	105651	101468	207119	3.96	3.59	3.77	−1806	−.85
17-19 Years	161038	161471	322509	6.04	5.72	5.87	29194	9.95
20-24 Years	256924	261737	518661	9.64	9.27	9.45	103937	25.06
20-21 Years	106292	108910	215202	3.99	3.86	3.92	42568	24.66
22-24 Years	150632	152827	303459	5.65	5.41	5.53	61369	25.35
Adults, 25-64 Years	1240243	1309663	2549906	46.52	46.37	46.44	297613	13.21
25-44 Years	733457	754534	1487991	27.51	26.71	27.10	266121	21.78
25-34 Years	432156	442252	874408	16.21	15.66	15.93	234937	36.74
25-29 Years	229755	233096	462851	8.62	8.25	8.43	116989	33.83
30-34 Years	202401	209156	411557	7.59	7.41	7.50	117948	40.17
35-44 Years	301301	312282	613583	11.30	11.06	11.18	31184	5.35
45-64 Years	506786	555129	1061915	19.01	19.65	19.34	31492	3.06
45-54 Years	266620	283492	550112	10.00	10.04	10.02	−28745	−4.96
55-59 Years	131999	146022	278021	4.95	5.17	5.06	34039	13.95
60-64 Years	108167	125615	233782	4.06	4.45	4.26	26198	12.62
Aging, 65 and Older	232768	352616	585384	8.73	12.48	10.66	91575	18.54
65-74 Years	151712	198747	350459	5.69	7.04	6.38	51736	17.32
75 and Over	81056	153869	234925	3.04	5.45	4.28	39839	20.42
75-84 Years	65171	115344	180515	2.44	4.08	3.29	25350	16.34
85 and Over	15885	38525	54410	.60	1.36	.99	14489	36.29
Totals—All Ages	**2665825**	**2824399**	**5490224**	**100.00**	**100.00**	**100.00**	**296555**	**5.71**

formula is questionable. With advances in Social Security, pensions, and employment opportunities, such calculations may be misleading and offensive to the more sensitive or militant members of the population advancing beyond the conventional retirement age of 65. But the concept of such a ratio has some validity. Both populations are likely to require and receive certain protective services in either the public or private sectors. It is with an understanding of these caveats that we, nonetheless, have produced such ratios for Indiana's ninety-two counties in Table 2.

Particular concentrations of high dependency ratios are found in west central and southeastern Indiana. Low concentrations are found in a band along the northern boundary of the state and in sections of the extended metropolitan Indianapolis area. (See Figure 4).

Lagrange County leads the state with a dependency ratio of 87.4%. Data from Table 2 make it clear that Lagrange's eminence in this category is due in large part to its many young people; from Table 2 we can calculate that 82% of Lagrange's dependent population is under age 18. (This is done by taking the percentage in columns one and two, summing them for a denominator, and then using the percentage of population 17 and younger as a numerator.) For the state as a whole, the dependency ratio is 67—that is, there are 67 persons either under age 18 or over age 64 for each 100 persons in the population between the ages of 18 and 64. Youngsters, those 17 and under, account for nearly three-quarters (73.4%) of this "dependent" population. In contrast, in 1970 the dependency ratio was nearly 82, and 78.8% of that number was accounted for by persons 17 and younger. Hence, the state's *apparent* ability to support services for its "dependent" populations has improved in the past decade, with a larger share now appropriately apportioned to the older population, if numbers count in such matters.

Table 2

Selected Age Characteristics, by County

			Percent of Population in Age Group				*Dependency Ratio*	
	Median		*Under 18*		*65 and Older*		*(Number*	
County	*Age*	*Rank*	*Age*	*Rank*	*Age*	*Rank*	*Per 100)*	*Rank*
Adams	27.7	(87)	34.0	(3)	11.1	(55)	82.3	(2)
Allen	28.6	(79)	30.4	(42)	9.5	(78)	66.5	(80)
Bartholomew	29.5	(57)	31.2	(30)	8.9	(82)	67.0	(76)
Benton	31.8	(10)	30.2	(46)	14.6	(9)	81.3	(7)
Blackford	31.3	(19)	29.9	(52)	12.6	(34)	74.0	(42)
Boone	31.0	(30)	30.2	(49)	11.4	(52)	71.0	(58)
Brown	31.2	(23)	29.2	(69)	10.7	(67)	66.2	(82)
Carroll	31.2	(23)	29.5	(63)	12.8	(32)	73.3	(46)
Cass	31.2	(23)	29.3	(66)	12.2	(41)	70.9	(60)
Clark	28.9	(77)	30.8	(36)	8.9	(80)	65.8	(83)
Clay	32.6	(7)	27.9	(80)	15.5	(4)	76.6	(23)
Clinton	31.4	(18)	29.1	(70)	14.2	(13)	76.2	(24)
Crawford	30.0	(42)	30.8	(37)	13.4	(20)	79.0	(13)
Daviess	31.1	(27)	30.0	(51)	14.2	(14)	79.1	(12)
Dearborn	29.5	(57)	32.0	(16)	10.8	(64)	74.7	(37)
Decatur	29.1	(68)	32.1	(13)	12.2	(42)	79.6	(9)
DeKalb	29.0	(72)	31.9	(17)	11.1	(56)	75.4	(28)
Delaware	27.8	(86)	26.9	(86)	10.0	(73)	58.7	(90)
Dubois	28.1	(83)	31.4	(27)	11.4	(51)	74.9	(36)
Elkhart	29.0	(72)	30.9	(34)	9.6	(77)	68.1	(70)
Fayette	29.6	(54)	31.6	(21)	11.0	(57)	74.3	(39)
Floyd	30.3	(34)	29.6	(62)	11.0	(59)	68.1	(69)
Fountain	32.1	(9)	29.1	(71)	13.5	(19)	74.1	(40)
Franklin	28.0	(84)	34.2	(2)	10.9	(60)	82.1	(4)
Fulton	32.4	(8)	28.5	(75)	14.4	(10)	75.2	(32)
Gibson	31.8	(10)	27.8	(81)	14.3	(11)	72.5	(52)
Grant	29.8	(49)	29.4	(64)	10.6	(69)	66.8	(78)
Greene	33.6	(2)	27.7	(82)	16.1	(2)	78.0	(15)
Hamilton	30.1	(38)	32.5	(8)	7.4	(90)	66.4	(81)
Hancock	29.8	(49)	32.8	(5)	8.3	(87)	69.7	(64)
Harrison	29.0	(72)	31.8	(19)	10.1	(72)	71.9	(54)
Hendricks	29.4	(61)	32.3	(11)	7.7	(89)	66.7	(79)
Henry	30.9	(31)	30.3	(45)	12.1	(45)	73.3	(45)
Howard	29.4	(61)	31.2	(31)	8.9	(81)	66.9	(77)
Huntington	29.9	(44)	29.7	(58)	13.3	(21)	75.4	(30)
Jackson	30.2	(36)	30.2	(47)	12.5	(35)	74.4	(38)
Jasper	27.0	(89)	32.4	(10)	9.8	(76)	72.9	(47)
Jay	31.1	(27)	30.5	(41)	13.2	(23)	77.8	(18)
Jefferson	29.4	(61)	29.0	(72)	11.2	(54)	67.4	(74)
Jennings	28.5	(80)	32.1	(12)	9.8	(75)	72.2	(53)
Johnson	28.7	(78)	31.7	(20)	8.7	(85)	67.7	(73)
Knox	31.5	(14)	25.3	(89)	15.2	(6)	68.0	(71)
Kosciusko	29.1	(68)	30.2	(48)	10.5	(70)	68.6	(66)
Lagrange	26.0	(90)	37.2	(1)	9.4	(79)	87.4	(1)

(Table 2 continued)

County	Median Age	Rank	Percent of Population in Age Group: Under 18 Age	Rank	65 and Older Age	Rank	Dependency Ratio (Number Per 100)	Rank
Lake	28.3	(82)	31.4	(26)	8.8	(83)	67.2	(75)
LaPorte	29.9	(44)	29.8	(55)	10.7	(68)	67.8	(72)
Lawrence	31.6	(13)	29.3	(67)	12.8	(31)	72.8	(50)
Madison	30.2	(36)	29.8	(56)	10.9	(62)	68.4	(67)
Marion	29.2	(66)	28.3	(77)	10.4	(71)	63.0	(87)
Marshall	30.1	(38)	30.4	(43)	12.5	(36)	75.0	(35)
Martin	29.5	(57)	31.5	(25)	10.9	(61)	73.6	(43)
Miami	27.9	(85)	31.5	(24)	9.9	(74)	70.7	(61)
Monroe	24.6	(91)	21.0	(92)	7.2	(91)	39.3	(92)
Montgomery	31.1	(27)	28.0	(78)	13.0	(28)	69.5	(65)
Morgan	29.0	(72)	32.8	(6)	8.7	(84)	71.0	(59)
Newton	29.1	(68)	32.4	(9)	11.8	(49)	79.2	(11)
Noble	29.0	(72)	31.6	(22)	10.8	(65)	73.5	(44)
Ohio	31.3	(19)	29.6	(59)	13.3	(22)	75.1	(34)
Orange	31.5	(14)	29.0	(73)	14.0	(15)	75.5	(27)
Owen	31.8	(10)	30.1	(50)	13.7	(17)	78.0	(16)
Parke	32.8	(5)	28.7	(74)	15.0	(7)	77.7	(19)
Perry	30.3	(34)	29.8	(54)	13.2	(25)	75.4	(29)
Pike	33.2	(3)	27.6	(84)	15.5	(5)	75.7	(25)
Porter	27.2	(88)	31.8	(18)	6.9	(92)	63.1	(86)
Posey	29.2	(66)	30.7	(40)	10.7	(66)	70.6	(62)
Pulaski	30.4	(33)	31.0	(33)	14.2	(12)	82.1	(3)
Putnam	29.5	(57)	26.2	(87)	12.3	(39)	62.5	(88)
Randolph	30.9	(31)	30.3	(44)	12.3	(40)	74.1	(41)
Ripley	29.6	(54)	32.0	(15)	13.1	(27)	82.0	(5)
Rush	30.0	(42)	31.6	(23)	13.0	(29)	80.5	(8)
St. Joseph	29.9	(44)	27.3	(85)	12.1	(46)	64.9	(84)
Scott	28.5	(80)	32.9	(4)	10.8	(63)	77.5	(20)
Shelby	29.9	(44)	31.1	(32)	11.0	(58)	75.2	(51)
Spencer	29.9	(44)	29.7	(57)	13.2	(24)	75.2	(31)
Starke	29.7	(53)	32.1	(14)	13.0	(30)	82.0	(6)
Steuben	30.1	(38)	28.4	(76)	12.2	(44)	68.2	(68)
Sullivan	33.7	(1)	27.7	(83)	16.4	(1)	79.0	(14)
Switzerland	32.7	(6)	29.6	(60)	14.6	(8)	79.4	(10)
Tippecanoe	24.6	(91)	23.0	(91)	8.2	(88)	45.2	(91)
Tipton	31.3	(19)	29.8	(53)	12.0	(47)	71.9	(55)
Union	30.1	(38)	31.4	(28)	12.4	(37)	77.9	(17)
Vanderburgh	31.5	(14)	25.5	(88)	13.7	(16)	64.5	(85)
Vermillion	33.0	(4)	27.9	(79)	15.7	(3)	77.5	(21)
Vigo	29.4	(61)	25.1	(90)	13.1	(26)	61.8	(89)
Wabash	29.1	(61)	29.6	(61)	12.0	(48)	71.2	(57)
Warren	31.3	(19)	30.7	(39)	12.2	(43)	75.1	(33)
Warrick	29.1	(68)	32.6	(7)	8.6	(86)	70.0	(63)
Washington	29.8	(49)	31.3	(29)	12.3	(38)	77.4	(22)
Wayne	31.2	(23)	29.2	(68)	12.6	(33)	71.9	(56)
Wells	29.6	(54)	30.8	(35)	11.3	(53)	72.9	(48)
White	31.5	(14)	29.4	(65)	13.7	(18)	75.5	(26)
Whitley	29.8	(49)	30.7	(38)	11.4	(50)	72.9	(49)

Figure 1
Indiana Population Breakdown for 1980

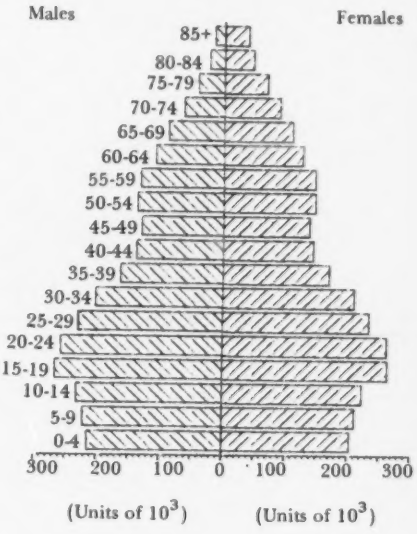
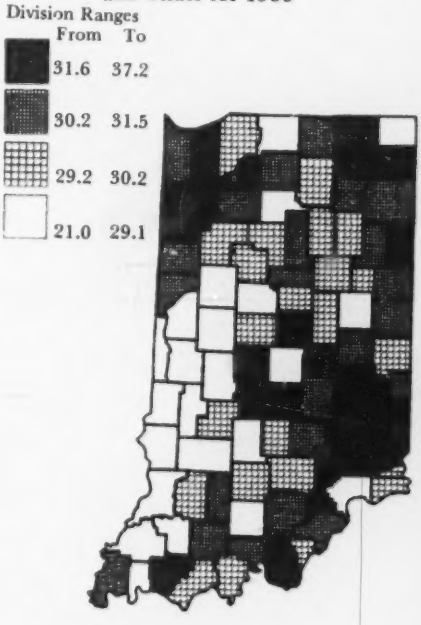


Figure 2
Percentage of Total Population 17 and Under for 1980



Indiana's Business

Indiana's Economy in Early 1983

Patrick Klingaman

Research Assistant, Division of Research, Indiana University Graduate School of Business

During the first two months of 1983 the Indiana economy was characterized by a mixture of indicators that were basically unchanged from last year and a healthy dash of upward-rising indicators. Indiana's recession seems to have bottomed out, with some signs hinting at a possible economic upswing.

One of the most dramatic turnarounds in 1983 has been in raw steel production. Indiana's raw steel production rose from 1.1 million net tons in December 1982 to

Figure 3
Percentage of Total Population 65 and Over for 1980

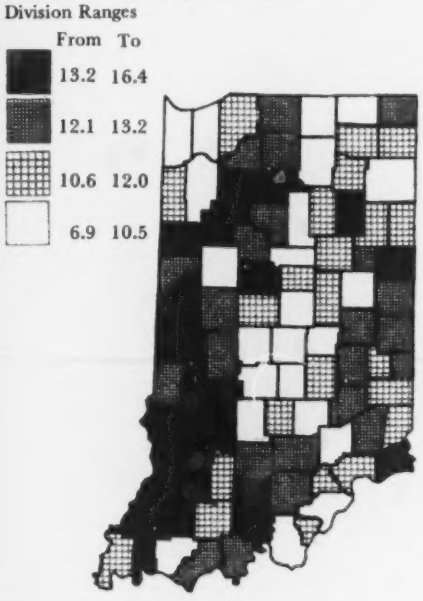
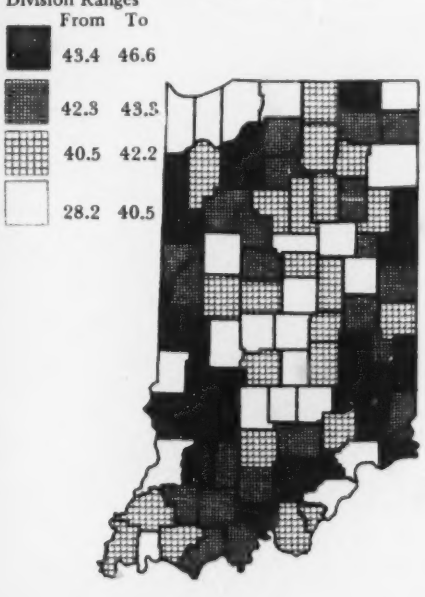


Figure 4
Percentage of Total Population 17 and Under, 65 and Over, for 1980



Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

City	*February 1983*	*January 1983*	*One Year Ago*	*Percent Change From Last Month*	*Percent Change From One Year Ago*
Anderson	20.7	19.0	21.4	9.00	−3.30
Bedford	12.1	12.2	10.6	−.81	14.15
Bloomington	3.6	3.9	3.3	−7.68	9.09
Columbus	15.9	17.8	18.3	−10.66	−13.10
Connersville	8.9	8.2	8.3	8.54	7.23
Crawfordsville	11.7	11.2	11.8	4.46	−.84
East Chicago	18.7	20.3	22.6	−7.87	−17.25
Elkhart	20.3	18.7	22.4	8.56	−9.37
Evansville	42.9	46.8	42.9	−8.32	.00
Fort Wayne	42.2	42.3	44.9	−.23	−6.00
Frankfort	8.3	8.3	8.7	.00	−4.59
Gary	154.6	166.2	174.6	−6.97	−11.44
Goshen	9.6	7.5	8.9	28.00	7.87
Hammond	51.4	60.9	49.5	−15.59	3.84
Huntington	4.7	4.7	4.6	.00	2.17
Indianapolis	326.4	305.9	325.5	6.70	.28
Jeffersonville	5.2	4.5	5.6	15.56	−7.13
Kokomo	59.6	62.0	60.2	−3.86	−.99
Lafayette	35.2	44.0	34.9	−19.99	.86
LaPorte	11.8	11.1	15.5	6.31	−23.86
Logansport	7.5	6.9	8.0	8.70	−6.24
Madison	2.5	2.7	2.3	−7.40	8.70
Marion	33.0	30.2	30.5	9.27	8.20
Michigan City	16.2	14.3	42.1	13.29	−61.51
Mishawaka	7.3	7.1	4.1	2.80	78.05
Muncie	12.5	12.6	13.6	−.78	−8.08
New Albany	4.7	5.0	4.7	−5.99	.00
New Castle	6.8	7.3	6.6	−6.84	3.03
Peru	5.3	5.5	5.3	−3.63	.00
Richmond	21.7	29.7	21.8	−26.93	−.45
Seymour	2.0	2.3	2.5	−13.03	−19.99
South Bend	28.1	23.9	29.9	17.57	−6.01
Terre Haute	24.4	25.7	25.7	−5.05	−5.05
Valparaiso	7.5	8.2	7.6	−8.53	−1.31
Vincennes	2.8	2.9	2.7	−3.44	3.70
Wabash	5.9	5.5	6.4	7.27	−7.80
Indiana	**1719.2**	**1720.1**	**1754.4**	**−.04**	**−2.00**

1.36 m.n.t. in January and 1.43 m.n.t. in February, a 30% increase so far this year. Nationally, steel mills, whose production declined for nine straight months at the end of 1982, also increased production in 1983, rising from 4.5 m.n.t. in December 1982 (the lowest monthly production figure during the 1979-82 recession) to 5.7 m.n.t. in February 1983, a 27% increase. The rate of capacity utilization in U.S. steel mills was 49% in February, up from 34% in December. (The average for 1982 was 47.3%.)

The employment situation in Indiana showed some signs of improvement in January. Although the unemployment rate dropped from 12.6% in December 1982 to 12.2% in February 1983, only the manufacturing employment index showed any significant gain. Industrial man-hours rose in an increasing number of Indiana's major manufacturing industries. Thirteen of the sixteen industrial categories rose between December and January: manufacturing, lumber and wood, furniture, paper, printing, chemicals, petroleum and products, rubber and plastics, primary metals, fabricated metals, nonelectrical machinery, electrical machinery, and transport equipment. Only food and apparel and textiles declined in January, while man-hours in stone, clay, and glass remained the same. In December, by contrast, man-hours in only nine industries had risen from the month before.

Construction activity in Indiana was basically favorable in the first two months of 1983, with indexes for total construction activity, residential expenditures, non-residential expenditures, and public works and utilities all increasing compared to December. However, residential housing starts dipped from 1,532 in December 1982 to 833 in January and 608 in February.

U.S. and Indiana Man-Hours in Industrial Production
(Seasonally Adjusted Data)

	United States (Millions)				*Indiana (Thousands)*			
			Percent Change From:				*Percent Change From:*	
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Manufacturing	December	713.8	0.2	−7.1	January	23151.3	6.5	−7.5
Food	December	62.8	−3.3	−3.5	January	1389.6	−2.4	−3.6
Apparel and Textiles	December	67.4	0.1	−7.8	January	287.2	−7.3	−22.5
Lumber and Wood	December	23.5	0.3	2.4	January	575.4	3.3	4.6
Furniture	December	16.8	1.7	−5.9	January	655.1	3.2	−4.8
Paper	December	27.5	1.1	−4.9	January	440.9	3.4	−17.3
Printing	December	48.7	3.3	4.4	January	1096.0	0.9	0.5
Chemicals	December	41.5	−1.7	−5.2	January	1276.4	6.9	−2.3
Petroleum and Products	December	9.0	−1.5	2.2	January	187.8	1.9	4.9
Rubber and Plastics	December	26.7	−0.0	−4.3	January	1244.8	2.6	18.9
Stone, Clay and Glass	December	21.3	−6.0	−9.7	January	722.8	0.0	−7.2
Primary Metals	December	30.5	−1.5	−25.9	January	3236.6	7.0	−16.8
Fabricated Metals	December	54.3	0.7	−13.3	January	1850.1	4.3	−8.3
Nonelectrical Machinery	December	85.4	4.5	−18.1	January	2569.6	11.4	−14.8
Electrical Machinery	December	76.7	−0.5	−5.8	January	3642.7	20.0	−1.9
Transport Equipment	December	68.6	1.8	−7.6	January	2675.1	4.8	−6.7

United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967 = 100)

	United States				Indiana			
Employment	*Latest Month*		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Nonagricultural Employment	December	134.5	134.8	137.8	January	111.6	111.0	116.3
Manufacturing Employment	December	93.2	93.5	101.2	January	76.4	75.6	86.2
Average Weekly Hours (No.)[2]	December	39.7	39.3	39.9	January	39.8	40.1	38.0
Average Weekly Earnings ($)[2]	December	344.99	338.37	329.97	January	399.59	398.59	369.74
Nonmanufacturing Employment	December	151.8	151.8	153.0	January	135.3	134.3	136.4
Unemployment Rate (%)	December	10.8	10.7	8.6	January	13.0	12.6	12.2
Unemployment–Married Males (%)	December	7.8	7.6	5.7	–	–	–	–
Continued Unemployment Claims	–	–	–	–	–	–	–	–
Production								
Bituminous Coal Production	November	131.3	138.4	156.3	–	–	–	–
Industrial Electricity Production	September	130.3	132.9	149.2	–	–	–	–
Industrial Electricity Sales	–	–	–	–	January	148.4	146.1	152.6
Manufacturing Production	December	133.9	134.0	142.0	January	129.3	129.2	137.8
Raw Steel Production	–	–	–	–	January	87.8	73.3	95.4
Construction								
Construction Activity–Total	November	302.6	292.2	293.4	January	211.6	198.8	167.2
Residential Housing Starts	December	95.1	109.3	68.6	January	62.9	98.8	43.6
Residential Expenditures	November	308.8	291.9	300.0	January	238.6	212.8	182.2
Nonresidential Expenditures	November	304.9	297.6	295.4	January	191.7	185.0	193.1
Public Expenditures	November	205.8	200.0	202.2	–	–	–	–
Public Works and Utilities	–	–	–	–	January	222.2	209.9	110.6
Other Indicators								
Personal Income Per Capita ($)	October	11216.00	11164.30	10782.60	1982:3	9971.00	9889.00	9732.00
Passenger Car Sales (Thousands)[2]	December	632.0	743.0	523.0	–	–	–	–
Year to Date (Thousands)	December	7980.0	7348.0	8536.0	–	–	–	–
Passenger Car Registration (Thousands)	–	–	–	–	December	14.4	14.5	9.3
Year to Date (Thousands)	–	–	–	–	December	158.9	144.5	180.6

[1] Current indicators are preliminary and subject to revision.
[2] Not seasonally adjusted

INDIANA BUSINESS REVIEW

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Volume 58 April 1983

Kate Wentzell **Hoosiers in Interstate Migration**

Lowell McCoskey **Revitalization of an Aging On-line System**

Morton J. Marcus **Details of the Long Slide**

Hoosiers in Interstate Migration

In this issue . . .

The movement of populations is largely a function of economic conditions. Kate Wentzell, in an analysis of 1980 Census data, reports on the movements of population into and out of Indiana prior to the recent recession.

For some time, Indiana has had a unique information system. Lowell McCoskey, who designed INDIRS in its current form, shares with us his thoughts on a revitalization of that system.

The performance of the Hoosier economy during the past four years is detailed in this month's Indiana's Business section. With recovery now in progress, this record gives a basis for gauging the magnitude of the expected rebound.

Morton J. Marcus

Kate Wentzell

Research Assistant, Division of Research, Indiana University Graduate School of Business

Recent data from the U.S. Bureau of the Census indicate that Indiana had net *out*-migration of approximately 107,000 people from April 1980 through June 1982. The recession and the resulting lack of opportunities for Hoosiers may explain such a high rate of movement from the state, but another recent report, using data from the 1980 Census of Population, suggests that net outmigration had been going on even when economic conditions were not so severe.

The 1980 Census of Population asked, on a sample basis, for the state in which the respondent lived in 1975. Data were then tabulated for all persons age 5 or older to give a picture of interstate movements. In the North, only three states did not have net outmigration (more people moving out than moving in): Maine, New Hampshire, and Vermont. The pattern of net outmigration ran south to include Maryland, Delaware, and the District of Columbia. But south of the Potomac only Mississippi lost population through migration. All other Southern states grew as a result of migration. West of the Mississippi River, all states in the West North Central region lost population, including Missouri, Kansas, and north to the Dakotas. Through the Mountain states and to the Pacific coast net inmigration was the rule. Alaska and Hawaii, however, both had net outmigration.

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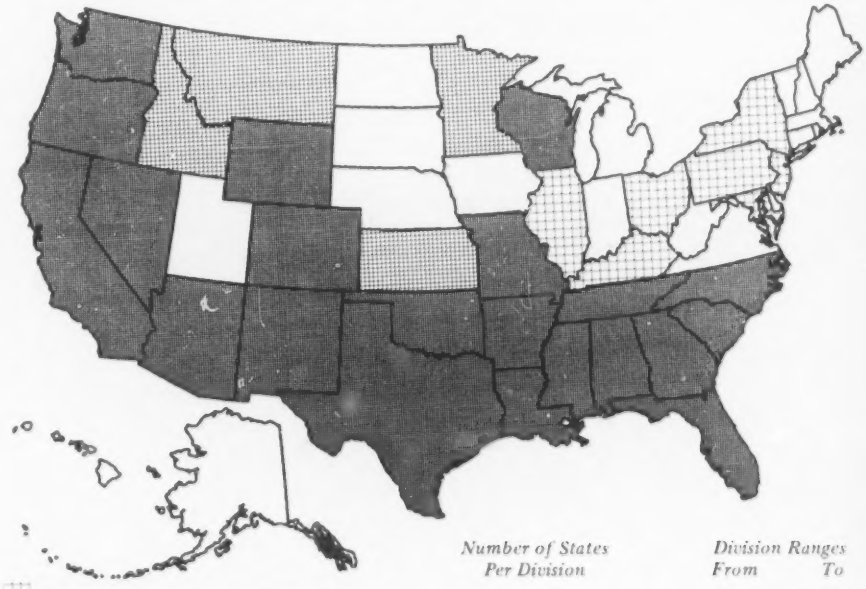
Indiana's In- and Outmigration Patterns



	Number of States Per Division	*Division Ranges From*	*To*
Net inmigration of more than 500 persons	7	667	17797
Net migration of less than 500 persons	19	–490	437
Net outmigration of 500 to 1,000 persons	4	–986	–541
Net outmigration of more than 1,900 persons	21	–31798	–1124

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Hoosier Patterns

The accompanying map shows the net pattern of movements involving Hoosiers. States with fewer than 500 net migrants moving into or out of Indiana are shown without shading. Light crosshatching indicates states which sent at least 500 more persons to Indiana than they received from the Hoosier state. States with darker crosshatching absorbed at least 500 more Hoosiers than they sent of their own residents to Indiana. The pattern is very clear. Indiana's net inmigrants came from a small geographic band of states stretching from New York through New Jersey, Maryland, Pennsylvania, and Ohio to Kentucky and Illinois. Only those seven states had net outmigration to Indiana of 500 or more persons. As Table 1 shows, there were many other states with net outmigration to Indiana, including Maine, New Hampshire, Alaska, and Hawaii, but the numbers from these states were small.

Neighboring states, as might be expected, contributed the greatest numbers to the population of Indiana. More than 17 percent of the 384,207 persons who moved to Indiana between 1975 and 1980 came from Illinois, while only 10 percent of the state's outmigrants went to Illinois. The largest interchanges as a percent of total movement are shown in Table 2. More than 46 percent of the inmigrants to Indiana came from our four neighboring states. But less than one-third of the Hoosiers who left went to these four states.

The largest amount of interaction was with Illinois. Nearly 66,000 Hoosiers had been residents of the Land of Lincoln in 1975, while more than 48,000 people who were Hoosiers in 1975 resided in Illinois in 1980. The gross migration flow between the two states was nearly 114,000. The second largest gross population flow involving Indiana was with Florida; 21,700 moved from the Sunshine state to Indiana and 53,500 left Indiana for the opportunities of Florida. Whereas Illinois provided the highest number of inmigrants to Indiana, Florida received the highest number of outmigrants.

Table 1

Hoosier Migration—State by State

	Inmigrants	*Outmigrants*	*Net Migrants*
Total	**384,207**	**467,014**	**−82,807**
Total—Northeast	**41,238**	**28,550**	**+12,688**
New England	9,504	8,635	+869
Maine	840	761	+79
New Hampshire	773	684	+89
Vermont	252	293	−41
Massachusetts	3,663	3,227	+386
Rhode Island	384	465	−81
Connecticut	3,592	3,155	+437
Middle Atlantic	**31,734**	**19,915**	**+11,819**
New York	13,484	7,368	+6,116
New Jersey	6,125	4,496	+1,629
Pennsylvania	12,125	8,051	+4,074
Total—North Central	**178,730**	**154,231**	**+24,499**
East North Central	**152,782**	**123,613**	**+29,169**
Ohio	48,062	34,739	+13,323
Illinois	65,820	48,023	+17,797
Michigan	30,769	31,259	−490
Wisconsin	8,131	9,592	−1,461
West North Central	**25,948**	**30,618**	**−4,670**
Minnesota	4,707	5,693	−986
Iowa	4,512	4,355	+157
Missouri	9,215	11,948	−2,733
North Dakota	912	896	+16
South Dakota	744	684	+60
Nebraska	2,017	2,342	−325
Kansas	3,841	4,700	−859
Total—South	**123,765**	**202,601**	**−78,836**
South Atlantic	**53,659**	**93,311**	**−39,652**
Delaware	701	651	+50
Maryland	4,478	3,708	+770
District of Columbia	753	675	+78
Virginia	9,060	9,544	−484
West Virginia	2,942	2,707	+235
North Carolina	5,276	7,404	−2,128
South Carolina	3,111	4,791	−1,680
Georgia	5,590	10,285	−4,695
Florida	21,748	53,546	−31,798
East South Central	**49,240**	**60,925**	**−11,685**
Kentucky	33,852	33,185	+667
Tennessee	8,740	16,411	−7,671
Alabama	3,636	7,128	−3,492
Mississippi	3,012	4,201	−1,189
West South Central	**20,866**	**48,365**	**−27,499**
Arkansas	3,380	6,129	−2,749
Louisana	2,494	3,961	−1,467
Oklahoma	2,333	5,305	−2,972
Texas	12,659	32,970	−20,311
Total—West	**40,474**	**81,632**	**−41,158**
Mountain	**14,271**	**35,192**	**−20,921**
Montana	380	921	−541
Idaho	587	1,186	−599
Wyoming	350	1,474	−1,124
Colorado	4,146	9,868	−5,722
New Mexico	1,441	2,625	−1,184
Arizona	5,557	15,317	−9,760
Utah	1,096	1,492	−396
Nevada	714	2,309	−1,595
Pacific	**26,203**	**46,440**	**−20,237**
Washington	2,607	4,745	−2,138
Oregon	1,197	3,022	−1,825
California	19,113	35,489	−16,376
Alaska	1,049	1,043	+6
Hawaii	2,237	2,141	+96

Source: *Supplementary Report, 1980 Census of Population: State of Residence in 1975 by State of Residence in 1980 (PC80-S1-9) (U.S. Department of Commerce, Bureau of the Census).*

Table 2

Leading States Interacting with Indiana

	Percent of Indiana Inmigrants	*Percent of Indiana Outmigrants*
Illinois	17.1	10.3
Ohio	12.5	7.4
Kentucky	8.8	7.1
Michigan	8.0	6.7
Neighboring states	46.4	31.5
Florida	5.6	11.5
California	5.0	7.6
Texas	3.3	7.0

Indiana had net outmigration to Michigan and Wisconsin as well as to Missouri and Minnesota among Midwestern states. Indiana was a net gainer from the three Middle Atlantic states (New York, New Jersey, and Pennsylvania). The flows with Kentucky were high and nearly equal—more than 33,000 people moved in each direction—but Indiana emerged with a net gain of 667.

Interstate movements are the result of many forces. Some people move to retire, others to be near family. Most moves are job related; people move in order to keep a position, accept a transfer, or find work. Some moves are related to securing more education. Although these figures do not provide age and school enrollment status, some of the movement is associated with college enrollment.

These figures do confirm that net outmigration from Indiana was taking place prior to the recent national recession. In general, the economy was in a period of expansion from 1975 until early 1980 when the Census was taken. Hence the outmigration of the Hoosier population during that period must be viewed in terms of relative opportunities. More detail by age will help those analyzing these movements to see why they took place.

Revitalization of an Aging On-line System

Lowell McCoskey

Systems and Programming Manager, Division of Research, Graduate School of Business, Indiana University. *This is an abbreviated version of a paper to be presented at the American Society for Information Science Mid-year Meeting at the University of Kentucky in Lexington on May 24, 1983.*

We have a system in Indiana that serves the data needs of educators, legislators, businessmen, and the general public. The system has been in operation since 1969, with some major restructuring as new concepts and technologies have come along.

The system is called INDIRS, the Indiana Information Retrieval System—a system designed, developed, and maintained by the Indiana University School of Business, Division of Research. INDIRS is a broad-ranging socio-economic and demographic data base and information system for Indiana's ninety-two counties, sixty multi-county areas, and two hundred and thirty cities and towns.

The system is self-teaching and easy to use. Extensive on-line instructions not only lead new users into the system but also contain information that can be used as a quick reference by users already familiar with the system. In addition to the on-line instructions, there is a comprehensive two-volume user's manual containing detailed instructions on the contents of the system and how to use it.

INDIRS is used by students and instructors throughout the state at schools, colleges, and universities. The system is also available in major public libraries and is used by a variety of business and professional people. The data base is drawn from a variety of federal and state sources. There are about 8,500 items in the data base, which can be arranged to produce more than 150 different tables.

All of the data are also available to a set of program modules that allow the user to select any item from any table (thus any item from the data base) for any or all geography (counties, multi-county areas, cities) or any collection of counties or cities as defined by the user. Also available is a ranking module that allows the user to see the counties or cities in rank order for the selected data. There is an arithmetic and statistical module that allows the user to do computations on the data as identified and selected from the data base.

The Current System

INDIRS began in 1969, but the system that we are using today was designed and developed during 1976 and 1977. During 1980, a significant set of enhancements to some programs was added to the system. The enhancements consist of statistical improvements to the arithmetic module and command improvements. All data are constantly revised, updated, and expanded into new tables. The 1980 census has brought significant new data to the system.

The present system is on a big main frame computer, an IBM-3033 used by Indiana University Administrative Computing. That environment is well suited to an application like INDIRS because of the availability of software such as compilers, telecommunications, utilities, and file handling, and because of the general dependability and reliability of the system as compared to those in research and instructional environments. Computer crashes and downtime are rare. The INDIRS system uses terminals that are of the family known as TWX compatible, or asynchronous, or start-stop. Most INDIRS users have these types of terminals and an acoustic coupler and telephone for dialing in to the system. There are at present forty-seven terminal identifications assigned to users around the state. Use of the system outside Bloomington, Indiana is via in-WATS. Nearly all use of the system is via printer terminals rather than CRTs.

Since these terminals are so-called dumb terminals and all of the intelligence is in the host computer, the telephone connect time is necessarily long. A user must stay connected through all the selection and printing of tables at 300 BAUD and during all computations, ranking, and

any further data analysis. Although the telephone charges are a relatively small portion of the total operational cost of the system, those charges are a very conspicuous and unappealing price to pay for the use of the system. Reducing connect time has become a very important consideration.

Speculation

In the last two years we have had dozens of requests from micro-computer users who want to be able to use INDIRS. If we were starting from scratch, with no outside influences and with the personnel of our own Division of Research, we would probably choose one of the popular mini-computer systems and put micro-computers into the hands of the using community. We would probably store and maintain the data base on the central mini-computer. Programs would probably consist of selection modules, report generation modules, and analytical modules. We would consider using a commercial data base management system (DBMS) for certain activities of the system, although a general purpose DBMS would tend to diminish some powerful characteristics of the system.

A Likely Scenario

Since we obviously are not starting from scratch, any future system will probably have to make use of and grow from the present system. As a beginning toward a new system, we have made three fairly good assumptions: the present system is useful and widely used; users and potential users have micro-computers and want to use them; there is a general distaste for long telephone connect time and costs.

If we visualize the system evolving toward micro-computer users with the idea that downloading can take place, we immediately want to know what to download. In the mini-computer and micro-computer environments, there are systems that allow the downloading and uploading of both data and software. But if we evolve from the present INDIRS system (with typical INDIRS funding) we do not have such luxuries. So as we look at possibilities for INDIRS to evolve toward micro-computer use, the question still remains: What is to be downloaded?

The first step might be to make the capability for the user to select not just one table but a whole category or group of tables to be downloaded over a high-speed line, then to print these while the micro-computer is in local mode. There is good reason for doing this since many users are concerned with a sub-set of tables for a group of counties. With the ability to hold and print at the micro-computer level, copies of any or all of the sub-set could be made as needed. It would be necessary to connect to the central computer only periodically to download tables with new data.

The second evolutionary step might be to make the capability for the user to select raw data by categories such as agriculture, personal income, or population. The micro-computer user could then use any of hundreds of commercially available and relatively cheap micro-computer software packages on the market today. The greatest advantage overall is that the micro-computer user is not limited to or restricted in any way by methods, practices, and the command language imposed by the INDIRS developers. The use of raw data would be limited only by the capacity of the micro-computer and the ability of the micro-computer user.

The third evolutionary step might be to make software that can be downloaded to a micro-computer. This would require a major design and developmental effort on the part of our staff. But the software download concept is most appealing because it would put at the micro-computer level the unique, dynamic, and powerful INDIRS characteristics that are tailor-made for the kinds of tabular outputs and the kinds of data analysis that typify the INDIRS system. With the ability to download both data and software, the micro-computer user would have to connect to the central system only periodically to "refresh" the data. Software and selected data could also be distributed on floppy disk, thus avoiding connect time and telephone charges altogether. With INDIRS software the micro-computer user could make extensive use of the system with no knowledge of programming or file structures, and would need to know only the INDIRS micro-computer commands.

Summary

When we talk about revitalizing an aging on-line system, we need to recognize which parts of the system are aging. Newer and better equipment could be used in place of the aging terminals and communications devices that are in use now. But the file concepts, the command language, and the modular programs are as viable today as they were in 1977. As we move into the 1980s, we see opportunities for significant development that will make the system more powerful and easy to use. To paraphrase Pogo, some of these opportunities seem insurmountable. But the system will advance with the changing world of computers. The most expedient and beneficial course we can take now seems to be some well-planned evolution from the present system.

Indiana's Business

Details of the Long Slide

Morton J. Marcus

Research Economist, Division of Research, Indiana University Graduate School of Business

Now that most analysts agree that the long recession is at an end, we can see just where that slide took place in the Indiana economy. Data just released by the U.S. Bureau of Economic Analysis indicate that Indiana's total personal income grew by 28.1 percent from the last quarter in 1978 through the last quarter of 1982. During the same period, the national growth in personal income was 44.1 percent. Simply put, if the state had grown at the national rate during these four years, personal income in Indiana at the end of 1982 could have been $62.95 billion instead of the $55.96 billion actually recorded, a difference of $7 billion, or nearly $1,280 per person in the state.

Indiana exceeded the national rate of growth in total personal income only in three of the sixteen quarters under consideration (see Table 1). Total personal income is composed of several major elements, some of which are contra-cyclical transfer payments, including unemployment compensation. When earnings alone are considered (the payments individuals receive either from owning a business or from wages and salaries), Indiana grew by just 14.2 percent in four years compared to a national growth of 33.5 percent. The detail of earnings growth is shown in Table 2. In farming, Indiana actually performed better than the nation as a whole; the state advanced by 10.7 percent while the nation's farm earnings declined by 4.3 percent. Non-farm private sector earnings fell far short in Indiana (11.5 percent growth in the state compared with 34.2 percent growth nationally). In the government sector, Indiana compared more favorably with the nation (35.7 percent in the Hoosier state compared with a national growth of 36.9 percent). In fact, federal military earnings in the state grew faster than the same component nationally. Non-

Table 1

Percent Change by Quarter, Total Personal Income

	Indiana	*U.S.*	*Indiana Minus U.S.*
1979:1	2.94	2.73	+0.21
2	1.55	2.36	−0.81
3	2.05	3.43	−1.38
4	1.55	2.65	−1.10
1980:1	0.86	2.63	−1.77
2	−0.41	1.13	−1.54
3	3.00	3.58	−0.58
4	3.74	3.38	+0.36
1981:1	2.19	3.07	−0.88
2	1.18	2.15	−0.97
3	3.16	3.24	−0.08
4	−0.07	1.43	−1.50
1982:1	1.17	0.65	+0.52
2	0.61	1.68	−1.07
3	0.48	1.57	−1.09
4	1.06	1.33	−0.27

Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

Local Office	*March 1983*	*February 1983*	*March 1982*	*Percent Change From: Last Month*	*One Year Ago*
Anderson	19.8	21.3	21.3	−7.03	−7.03
Bedford	12.7	12.1	11.1	4.96	14.41
Bloomington	3.7	3.9	4.5	−5.12	−17.77
Columbus	15.9	15.9	17.8	.00	−10.66
Connersville	8.7	8.9	8.1	−2.24	7.41
Crawfordsville	12.0	11.0	11.2	9.09	7.14
East Chicago	18.2	17.9	21.7	1.68	−16.12
Elkhart	23.3	20.3	22.0	14.78	5.91
Evansville	43.4	44.5	47.3	−2.46	−8.24
Fort Wayne	45.5	42.2	42.2	7.82	7.82
Frankfort	7.9	8.3	8.7	−4.81	−9.19
Gary	154.6	154.6	158.4	.00	−2.39
Goshen	9.5	9.0	8.7	5.56	9.20
Hammond	54.5	55.7	54.3	−2.14	.37
Huntington	4.7	4.7	4.6	.00	2.17
Indianapolis	343.8	316.0	349.7	8.80	−1.68
Jeffersonville	4.9	5.2	5.5	−5.76	−10.90
Kokomo	59.7	59.6	53.9	.17	10.76
Lafayette	37.4	34.7	37.7	7.78	−.79
LaPorte	11.5	11.2	14.5	2.68	−20.68
Logansport	6.7	7.5	7.3	−10.66	−8.21
Madison	2.5	2.5	2.2	.00	13.64
Marion	32.2	33.0	29.1	−2.41	10.65
Michigan City	15.2	16.2	40.7	−6.16	−62.64
Mishawaka	6.7	7.3	3.0	7.37	121.84
Muncie	13.1	12.5	12.4	4.80	5.65
New Albany	4.7	4.7	4.5	.00	4.44
New Castle	8.3	6.8	8.1	22.06	2.47
Peru	4.6	4.8	4.5	−4.16	2.22
Richmond	24.8	22.7	24.5	9.25	1.22
Seymour	2.2	2.0	2.5	10.00	−11.99
South Bend	27.4	25.6	25.1	7.03	9.16
Terre Haute	24.4	24.7	26.9	−1.20	−9.28
Valparaiso	8.1	8.5	8.9	−4.70	−8.98
Vincennes	3.3	2.8	3.0	17.86	10.00
Wabash	6.4	5.8	5.6	10.34	14.29
Indiana	**1762.6**	**1719.2**	**1769.0**	**2.52**	**−.35**

Table 2
Percent Change in Personal Income in Indiana and the U.S., by Sector 1978:4–1982:4

	Indiana	*United States*
Total Personal Income	28.1	44.1
Total Earnings	14.2	33.5
Farm	10.7	−4.3
Non-Farm	14.3	34.6
Private	11.5	34.2
Agricultural Services, Forestry, Fishing, and other	33.8	41.2
Mining	27.8	65.2
Construction	−36.3	14.1
Manufacturing	2.7	21.5
Nondurable Goods	32.1	30.3
Durable Goods	−4.5	16.8
Transportation and Public Utilities	20.0	36.1
Wholesale Trade	16.6	37.5
Retail Trade	13.3	25.8
Finance, Insurance, and Real Estate	25.4	45.6
Services	38.2	57.5
Government and Government Enterprises	35.7	36.9
Federal, Civilian	23.0	27.9
Federal, Military	67.5	49.9
State and Local	37.6	38.4

durable manufacturing also performed better in Indiana during these past four years than did the same sector nationally (32.1 percent compared with 30.3 percent).

Table 3

Percent Change in Personal Income, by Regions and Selected States

	1978:4-1982:4	*1981:4-1982:4*
United States	**44.1**	**5.3**
New England	**47.7**	**6.3**
Mideast	**43.3**	**5.9**
Great Lakes	**31.2**	**3.3**
Illinois	34.8	3.9
Indiana	28.1	3.4
Michigan	24.1	1.4
Ohio	32.6	4.0
Wisconsin	36.9	5.0
Plains	**35.8**	**3.7**
Minnesota	39.3	3.5
Missouri	37.6	4.7
Southeast	**48.5**	**6.4**
Arkansas	36.5	3.3
Kentucky	37.5	4.7
North Carolina	43.8	6.2
Tennessee	40.0	5.3
West Virginia	34.4	2.1
Southwest	**60.6**	**5.8**
Rocky Mountain	**49.5**	**5.2**
Pacific	**48.1**	**5.7**

In both construction and durable goods manufacture, Indiana experienced a *decline* in earnings. This is particularly noteworthy since all of the personal income data are not adjusted for price changes; hence many of the figures reported reflect *real* declines despite the nominal increases reported. During the last four years, the United States saw earnings in durable goods rise by 16.8 percent, but Indiana experienced a 4.5 percent decline. In construction earnings, the nation advanced by 14.1 percent, but Indiana's construction earnings fell by more than one-third. Retail trade earnings in the Hoosier state grew less than one-half as rapidly as those in the nation. Mining was the fastest growing part of the private sector nationally, but business and personal services held that honor in this state.

Each quarter during the past four years, wages and salaries have grown in the nation. However, in Indiana, wages and salaries (unadjusted for price changes) declined in the last three quarters of 1982. Few facts illustrate the severity of Indiana's different experience more clearly than this.

State Comparisons

The five Great Lake states (including Indiana) had the slowest rate of growth in

U.S. and Indiana Man-Hours in Industrial Production
(Seasonally Adjusted Data)

	United States (Millions)				*Indiana (Thousands)*			
	Latest Month		*Percent Change from: Previous Month*	*One Year Ago*	*Latest Month*		*Percent Change from: Previous Month*	*One Year Ago*
Manufacturing	March	723.6	1.7	−3.8	February	23081.6	−0.1	−9.9
Food	March	60.6	−1.4	−3.0	February	1345.5	−4.4	−4.3
Apparel and Textiles	March	71.9	1.7	−2.1	February	308.2	7.3	−18.6
Lumber and Wood	March	26.2	3.0	18.3	February	580.5	1.8	−3.1
Furniture	March	18.4	1.3	−0.6	February	646.6	−1.9	−2.6
Paper	December	27.5	1.0	−4.9	February	430.9	−1.5	−19.2
Printing	March	49.6	1.9	5.6	February	1089.4	−0.9	1.5
Chemicals	March	43.1	0.2	−1.4	February	1257.0	−0.6	−2.1
Petroleum and Products	March	8.8	0.9	2.3	February	175.3	−7.9	3.9
Rubber and Plastics	March	28.3	3.9	2.4	February	1287.1	3.1	11.3
Stone, Clay and Glass	March	21.7	3.7	−4.4	February	739.5	2.3	−8.8
Primary Metals	March	32.3	2.2	−17.5	February	3383.6	4.3	−14.6
Fabricated Metals	March	55.2	1.6	−11.6	February	1833.7	0.8	−12.0
Nonelectrical Machinery	March	87.9	0.3	−15.8	February	2509.4	−1.5	−17.1
Electrical Machinery	March	79.1	1.8	−1.7	February	3553.9	−2.9	−5.3
Transport Equipment	March	70.5	1.8	−4.3	February	2711.5	1.6	−10.1

personal income both during the past year and during the four-year period starting in the fourth quarter of 1978 (see Table 3). Only Michigan among the Great Lakes states had slower growth than Indiana in both periods. In the most recent year, West Virginia and Arkansas also fell below Indiana, but surpassed us for the four-year period. Over the longer period, the four Southwestern states (Texas, Oklahoma, New Mexico, and Arizona) had the highest rate of growth. In the most recent year, the twelve states of the Southeast with 6.4 percent growth and the six New England states with 6.3 percent led the nation. Among the Great Lakes states, Wisconsin was the leader, although it failed to match the national rate of growth.

In the fourth quarter of 1978, Indiana accounted for 2.40 percent of total personal income in the nation. The long slide brought the state's share of personal income down to 2.14 percent. The recovery of 1983 should see Indiana's share grow once again. The question is whether the growth will exceed the national rate of recovery for a long enough period to return the state's share to the 2.4 percent level, or whether more permanent damage has resulted from the long slide.

United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967 = 100)

	United States				*Indiana*			
Employment	*Latest Month*		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Nonagricultural Employment	March	135.1	134.9	137.3	February	111.2	111.4	116.2
Manufacturing Employment	March	93.9	93.7	99.3	February	76.9	76.4	86.0
Average Weekly Hours (No.)[2]	March	39.6	38.8	39.1	February	39.7	39.7	39.4
Average Weekly Earnings ($)[2]	March	346.50	339.11	327.27	February	399.38	398.59	384.15
Nonmanufacturing Employment	March	152.2	152.5	153.0	February	134.4	135.0	136.5
Unemployment Rate (%)	March	10.1	10.2	8.9	February	12.2	13.0	11.8
Unemployment–Married Males (%)	March	7.1	7.2	5.6	–	–	–	–
Production								
Bituminous Coal Production	February	145.6	136.2	169.0	–	–	–	–
Industrial Electricity Production	December	126.3	126.8	142.7	–	–	–	–
Industrial Electricity Sales	–	–	–	–	February	148.3	148.4	151.3
Manufacturing Production	March	139.2	137.4	140.1	February	132.3	129.3	140.4
Raw Steel Production	February	55.3	51.5	71.3	February	97.7	89.6	110.9
Construction								
Construction Activity–Total	February	320.0	326.7	284.0	February	200.2	195.1	163.2
Residential Housing Starts	March	125.4	138.2	71.6	February	56.9	64.2	88.3
Residential Expenditures	February	375.8	368.3	272.5	February	191.5	175.5	171.9
Nonresidential Expenditures	February	298.6	312.2	294.7	February	175.7	180.2	186.9
Public Expenditures	February	193.3	217.9	193.3	–	–	–	–
Public Works and Utilities	–	–	–	–	February	238.8	250.5	104.9
Other Indicators								
Personal Income Per Capita ($)	February	11321.40	11316.80	10867.50	1982:3	9971.00	9889.00	9732.00
Passenger Car Sales (Thousands)[2]	March	822.0	626.0	777.0	–	–	–	–
Year to Date (Thousands)	March	2043.0	1221.0	1944.0	–	–	–	–
Passenger Car Registrations (Thousands)	–	–	–	–	January	8.6	14.4	8.5
Year to Date (Thousands)	–	–	–	–	January	8.6	158.9	8.5

[1] Current indicators are preliminary and subject to revision.
[2] Not seasonally adjusted

INDIANA BUSINESS REVIEW

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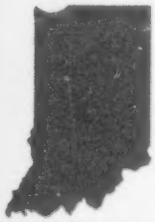

Indiana Business Review

Volume 58 May 1983

R. Jeffrey Green **The Economic Outlook at Midyear**

Richard L. Pfister and Gary Albrecht **Updated 1983 Indiana Forecast**

Important Renewal Notice (see page 7)

The Economic Outlook at Midyear

In this issue . . .

The words with which our authors describe the economy are most encouraging: "The best year since 1978 . . . recovery gathering momentum . . . employment gains . . . real income improvements." For the nation and for the state, the economic outlook is brighter, and this issue of the *Review* reflects that optimism in its updated version of our annual forecast.

Last November these pages forecast recovery. Happily, that forecast has been proven correct and the data released regularly by state and federal agencies reinforce the models and judgment of our writers. This month Jeffrey Green reviews the November forecast for the nation while Richard Pfister and Gary Albrecht detail the state's movement into the expansionary phase of the business cycle. Next month in these pages our regional writers will provide their views on the progress made throughout the Hoosier state.

Morton J. Marcus

Indiana Business Review

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R. Jeffrey Green

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Last November the outlook was for significant economic growth in 1983. The growth was forecast to be relatively slow in the first half of the year and more rapid in the second half. What was a forecast in November is now becoming a reality. After declining in the fourth quarter of 1982, real GNP grew at a 2.5 percent annual rate in the first quarter of 1983. The turnaround in the economy was led by increases in demand for housing and consumer durables, particularly autos, and by the continued increases in defense spending. The first-quarter growth in output was accompanied by a continuation of the very rapid inventory run-off begun last year. With sales continuing to grow and with inventories now relatively lean, the stage is set for a period of fairly rapid recovery.

The early indicators of economic activity in the second quarter suggest that the recovery is gathering momentum. The index of leading indicators has continued to make solid gains. Personal income growth has improved as employment begins to expand. Industrial production rose for the sixth consecutive month in April and new orders continue to show strength.

The forecast for the second half of the year has not changed drastically because the first half of 1983 is turning out much as we had predicted last November. We expect the growth in real GNP to be 4.6 percent from the fourth quarter of 1982 to the fourth quarter of 1983, which implies growth rates in excess of 5 percent in the second half of the year.

Although the growth in total demand is expected to be strong, it will not be uniform throughout the economy. Some sectors will grow rapidly; others may experience little or no growth. The leading sectors are expected to be durable consumer goods producers, residential construction, and defense goods. Automobile sales have been increasing and are expected to increase further. The strong growth of automobile production reflects in part the severity of the recession for this industry; even with the strong forecasted increase in sales and production, the industry is not expected to reach the peak levels of sales and production it achieved in the 1970s. Housing, too, is coming out of a severe recession, and the strong growth in this sector is also partly a result of the earlier depressed levels and the buildup of a backlog of demand. Somewhat lower interest rates are also helping to stimulate the demand for housing and consumer goods. The final area of strength is the defense industry. Although there has been considerable debate in Congress about the defense budget, even the somewhat lower growth advocated by some in Congress represents a substantial increase. Thus, the range of debate seems to be from reasonably rapid to very rapid growth in defense spending.

In contrast to these areas of rapid growth, some sectors of the economy will show little or no growth for the remainder of 1983. Our export markets are expected to show only small increases, in part because our major trading partners remain in recession or are just beginning to recover and in part because the dollar remains very strong and hence the relative prices of U.S. goods in foreign markets are high. Business expenditures for plant and equipment are also forecast to be weak for the remainder of 1983. Capacity utilization is quite low and investment spending typically lags the upturn in the rest of the economy. The other weak spot in the economy is the non-defense spending component of federal government purchases. The consensus in Congress and the administration to cut such purchases appears to be intact, and hence this component of GNP is expected to continue to decline.

Despite the recovery this year, inflation is forecast to remain moderate. The price deflator for consumer purchases increased at only a 2.3 percent annual rate in the first quarter of 1983 after increasing 5.9 percent in 1982 and 8.6 percent in 1981. The decline in oil prices was a significant

Updated 1983 Indiana Forecast

Richard L. Pfister

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Gary R. Albrecht

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Although the recession is over and the recovery appears to be gaining strength, our current forecast for the Indiana economy is less bullish than our forecast of last November with respect to total employment and the unemployment rate. Indiana's employment in the fourth quarter of 1982 and the first quarter of 1983 was somewhat lower than we had forecast, and the first quarter growth of the national economy was not strong enough to boost employment in Indiana's basic industries. Since our updated forecast for the remainder of 1983 takes off from a lower level of employment, the year-ending total is lower than had been forecast last November. The unemployment rate is, consequently, a little higher than we had expected in November's outlook. Our forecast for the state assumes that real GNP for the nation will grow as forecasted by Professor Green: 5.0 percent in the second quarter, 5.6 percent in the third quarter, and 4.9 percent in the fourth quarter.

Summary of the Revised Indiana Forecast:

- The level of establishment employment in the fourth quarter of 1983 is forecasted to be 51,000 more than it was in the fourth quarter of 1982.
- The seasonally adjusted unemployment rate is expected to fall to 11.4 percent in the fourth quarter of 1983 from a rate of 13.2 in the fourth quarter of 1982.
- Real personal income is forecasted to be 3.3 percent higher in the fourth quarter of 1983 than it was in the fourth quarter of 1982.

This forecast was produced with the technical assistance of Cary Harmon.

Employment

Manufacturing employment decreased by 33,234 from the third quarter of 1982 to the fourth quarter of 1982. This 5.6 percent decrease in one quarter has been exceeded only twice in the last decade. Our forecast in the November/December 1982 *IBR* did not anticipate such a severe decline. Table 1 shows that the forecasted increase in establishment employment from the fourth quarter of 1982 to the fourth quarter of 1983 is 51,000. Manufacturing employment is forecasted to rise by 23,500, a 4.2 percent increase. Over the same period, nonmanufacturing employment is expected to increase by 27,600, or 1.9 percent. That the rate of growth in manufacturing employment is higher is consistent with the fact that manufacturing employment tends to be more sensitive to the national business cycle. There has, however, been a secular decline in the relative importance of manufacturing employment in Indiana. In the fourth quarter of 1973, manufacturing employment accounted for 37.3 percent of total establishment employment. By the fourth quarter of 1978, this percentage had fallen to 33.7, and we are forecasting that in the fourth quarter of 1983 this percentage will be 28.3. This trend is disturbing because manufacturing tends to pay higher wages than nonmanufacturing.

In the November/December issue of the *IBR*, we noted that employment in Indiana has been declining generally since 1979. That decline has been concentrated in durable goods manufacturing. Employment in durable goods manufactures in 1983:2 will be lower by 31 percent than it was at its peak in 1979:2. By contrast, employment in nondurable manufactures in 1983 will be 12 percent lower than its previous peak, while nonmanufacturing employment will be only 4.5 percent lower than its previous peak.

Table 2 shows the previous peak in Indiana's major durable goods industries and the expected 1983 employment in the comparable quarters. The six major industries experienced a total decline of 143,000 jobs from their previous peaks. Despite our

factor in this improvement, but by no means the only one. Wage increases have slowed considerably and productivity is rising briskly, both of which hold costs down. It is these factors which lie behind our forecast of 4.4 percent inflation for consumer purchases for all of 1983.

Despite the economic recovery in 1983, unemployment will improve only slowly and the unemployment rate is not expected to drop below 9.5 percent before year end. Employment is expected to grow throughout the year, but in order for the unemployment rate to fall, employment increases must exceed the number of new entrants and reentrants into the labor market. The labor force is expected to rise faster in 1983 than in 1982 as improved labor markets encourage additional people to seek employment.

Financial markets hold one of the main keys to recovery. This year's recovery was helped by a decline in the past twelve months of about 6 percentage points in short-term interest rates and of about 3 percentage points in long-term rates. Nonetheless, interest rates remain very high, particularly given current rates of inflation. The outlook is for short-term interest rates to increase slightly during the remainder of 1983 while long-term rates fall slightly. The expected increase in short-term rates is the result of a forecasted tightening of monetary policy by the Federal Reserve, which will cause the supply of short-term credit to be less than the demand—a demand which is increasing as the recovery proceeds. At the same time long-term rates should be declining because they are more sensitive to longer-term inflation expectations and inflation is expected to remain moderate.

At the halfway point, 1983 looks to be the best year for the economy since 1978. The recovery is a reality and appears to be gaining strength. Inflation is down and the outlook is that it will remain moderate. Unemployment will remain stubbornly high but some improvements will be coming. Finally, interest rates will remain high enough to restrain the recovery but should not return to levels that would push the economy back into recession.

Table 1

Econometric Model of Indiana Summary Variables

	1982:4	*1983:1*[3]	*1983:2*	*1983:3*	*1983:4*
Personal Income[1]	55960.0	56579.0	57573.8	58938.2	60178.2
Percent Change (AR)	4.3	4.5	7.2	9.8	8.7
Real Personal Income[1]	26647.6	26789.3	26941.4	27260.9	27516.3
Percent Change (AR)	−.2	2.1	2.3	4.8	3.8
Wage and Salary Disbursements[1]	32565.0	33321.5	33872.6	34636.9	35243.1
Percent Change (AR)	−3.2	9.6	6.8	9.3	7.2
Real Wage and Salary Disbursements[1]	15507.1	15777.2	15850.5	16020.8	16114.9
Percent Change (AR)	−7.4	7.2	1.9	4.4	2.4
Nonmanufacturing Employment[2]	1438.6	1399.2	1441.8	1455.3	1466.2
Manufacturing Employment[2]	556.0	547.0	565.8	574.5	579.5
Establishment Employment[2]	1994.7	1949.1	2007.5	2029.9	2045.7
Total Number Employed[2]	2213.0	2160.7	2236.1	2258.1	2263.7
Percent Unemployment (NSA)	13.0	13.4	12.0	11.2	11.2
Percent Unemployment (SA)	13.2	12.4	12.2	11.9	11.4

[1] In millions of dollars (SAAR)
[2] Thousands of persons, not seasonally adjusted
[3] 1983:1 values are preliminary estimates
AR—Annual Rate
NSA—Not Seasonally Adjusted
SA—Seasonally Adjusted

Table 2

Indiana Employment in Key Durable Goods Industries, Peak in 1978-79 Compared to Same Quarter in 1983

Industry	*Peak Employment (000's) and Quarter*		*Employment (000's) in Comparable Quarter in 1983*		*Change (000's)*
Steel	73.4	(79:2)	53.0	(83:2)	−20.4
Fabricated metals	66.2	(78:4)	44.5	(83:4)	−21.7
Nonelectrical machinery	81.0	(79:1)	58.2	(83:1)	−22.8
Electrical machinery	118.1	(79:2)	82.6	(83:2)	−35.5
Transportation equipment (excluding autos)	42.2	(79:1)	28.8	(83:1)	−13.4
Autos and parts	71.0	(78:4)	41.8	(83:4)	−29.2
Subtotal	**451.9**		**308.9**		**−143.0**
All durables	**581.9**	**(79:2)**	**415.5**	**(83:2)**	**−166.4**

forecast of employment gains for these six industries in 1983, they will still be far below their previous employment peaks. Even with a vigorous and prolonged recovery, employment in durable goods manufacturing is not expected to attain the levels of 1978 and 1979. The reasons appear to be increased productivity and loss of competitive advantage to other production centers in the United States and abroad.

There are a couple of bright spots in manufacturing employment. Furniture (not shown in Table 1) should increase by 13 percent from the fourth quarter of 1982 to the fourth quarter of 1983 and autos and parts should increase by 15 percent. Both of these sectors are sensitive to interest rates, which declined going into the first quarter of 1983. Retail trade, the largest sector in nonmanufacturing employment, is forecasted to be lower in the fourth quarter of 1983 than it was in the fourth quarter of 1982. From the fourth quarter of 1982 to the first quarter of 1983, employment in retail trade decreased by 27,000; although part of this decrease is seasonal, the absolute amount is about twice the normal decrease in this time period. This drop may be a result of weak consumer spending in the first quarter of 1983.

Unemployment Rate

We are forecasting that the seasonally adjusted unemployment rate will be 11.4 percent in the fourth quarter of 1983. This rate is, of course, still high relative to both historical levels (see **Figure 1**) and the national rate. The 11.4 percent unemployment rate forecasted for the fourth quarter of 1983 is, however, a big improvement over the 13.2 rate that Indiana experienced in the fourth quarter of 1982. In the first quarter of 1983 Indiana's unemployment rate was more than two percentage points higher than the nation's (12.4 compared to 10.2). We are forecasting that the gap between the unemployment rate in Indiana and the nation will be down to one and a half percentage points in the fourth quarter of 1983.

The November/December issue of the *IBR* pointed out that the size of the labor force in Indiana has been rapidly declining by an average of almost 50,000 a year from the third quarter of 1979 to the third quarter of 1982. We forecasted that this decline would be reversed and that the labor force would increase by 14,000 from the fourth quarter of 1982 to the fourth quarter of 1983. We are still forecasting that the labor force will increase in that time period, but the increase has been

lowered from 14,000 to slightly less than 9,000.

Personal Income

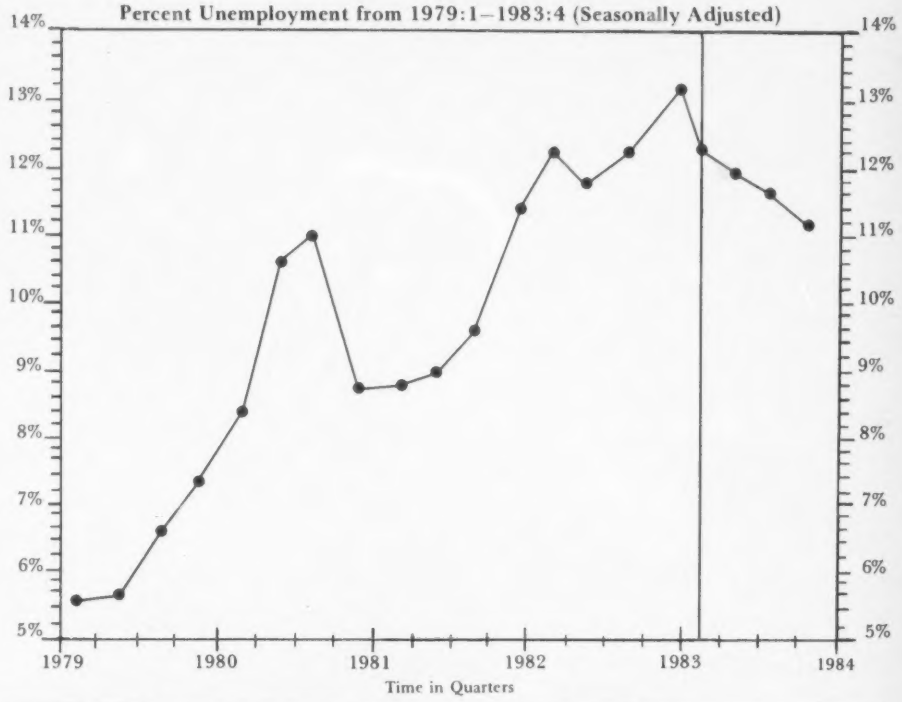
Real personal income is forecasted to increase at an annual rate of a lethargic 2.3 percent in 1983:2, which follows an even lower rate of 2.1 percent in 1983:1. Real personal income then grows by a healthy 4.8 percent in 1983:3 before slowing to a rate of 3.8 percent in the final quarter of 1983. These rates of growth, which imply an increase in real personal income of almost 3.3 percent from the fourth quarter of 1982 to the fourth quarter of 1983, are low for the early stages of recovery from a severe recession. The rate of growth in real wages and salaries is in line with the forecasted growth in employment discussed above.

Among the other components of personal income we are forecasting that dividends, interest, and rent will grow by less than 2.5 percent. That dividends, interest, and rent is growing by less than total personal income reflects the almost flat forecast for interest rates. Non-farm proprietors' income is forecasted to grow by more than 10 percent, the highest growth rate among the components of real personal income.

This updated Indiana forecast for the remainder of 1983 is disappointing in that it calls for a rather modest improvement in business conditions. Nevertheless, it is encouraging to have even modest improvement after a recession that has been continuous for Indiana since 1979.

Figure 1

Percent Unemployment from 1979:1–1983:4 (Seasonally Adjusted)



United States and Indiana Man-Hours in Industrial Production
(Seasonally Adjusted Data)

	United States (Millions)				*Indiana (Thousands)*			
	Latest Month		*Percent Change From: Previous Month*	*One Year Ago*	*Latest Month*		*Percent Change From: Previous Month*	*One Year Ago*
Manufacturing	April	725.9	0.2	−2.8	April	22714.5	0.3	−5.7
Food	April	61.5	0.8	−0.8	April	1585.8	17.5	14.6
Apparel and Textiles	April	73.9	2.1	1.3	April	309.4	0.9	−17.8
Lumber and Wood	April	27.4	4.7	20.8	April	633.7	5.5	1.4
Furniture	April	17.7	4.7	6.6	April	705.2	6.0	7.6
Paper	April	28.1	0.7	−1.6	April	441.7	2.4	−15.1
Printing	April	49.5	0.3	4.3	April	1101.7	2.6	−0.6
Chemicals	April	43.9	2.8	−1.2	April	1162.3	−1.0	−11.9
Petroleum and Products	April	9.1	2.3	0.8	April	181.1	2.4	7.7
Rubber and Plastics	April	29.0	2.8	3.8	April	1297.0	0.9	9.9
Stone, Clay and Glass	April	23.0	5.2	−1.1	April	755.8	2.4	−8.4
Primary Metals	April	33.1	2.0	−12.5	April	3470.2	0.3	−4.0
Fabricated Metals	April	55.4	1.1	−6.3	April	1913.5	2.9	−4.2
Nonelectrical Machinery	April	85.1	−3.2	−13.2	April	2324.2	−3.3	−8.9
Electrical Machinery	April	80.0	1.4	0.4	April	3155.3	−2.3	−14.6
Transport Equipment	April	72.5	1.5	1.0	April	2957.3	4.1	−4.4

Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

City	April 1983	March 1983	One Year Ago	Percent Change From: Last Month	Percent Change From: One Year Ago
Anderson	14.9	19.8	22.6	-24.74	-34.06
Bedford	14.2	12.7	11.7	11.81	21.37
Bloomington	4.4	3.7	4.3	18.92	2.33
Columbus	16.5	15.9	18.1	3.77	-8.83
Connersville	9.8	8.7	9.1	12.64	7.69
Crawfordsville	11.1	12.0	11.3	-7.49	-1.76
East Chicago	18.0	18.2	21.2	-1.09	-15.08
Elkhart	20.6	23.3	22.9	-11.58	-10.03
Evansville	46.9	43.4	50.4	8.06	-6.93
Fort Wayne	43.5	45.5	43.5	-4.39	.00
Frankfort	8.7	7.9	8.4	10.13	3.57
Gary	17.0	154.6	139.0	-88.99	-87.76
Goshen	9.8	9.5	9.2	3.16	6.52
Hammond	55.6	54.5	57.1	2.02	-2.62
Huntington	5.5	4.7	5.1	17.02	7.84
Indianapolis	358.7	343.8	355.2	4.33	.99
Jeffersonville	5.7	4.9	5.8	16.33	-1.71
Kokomo	76.6	59.7	64.7	28.31	18.39
Lafayette	43.2	37.4	42.8	15.51	.93
LaPorte	11.8	11.5	14.6	2.61	-19.17
Logansport	16.6	6.7	7.8	147.76	112.82
Madison	3.0	2.5	2.5	20.00	20.00
Marion	30.2	32.2	31.0	-6.20	-2.57
Michigan City	15.0	15.2	39.4	-1.31	-61.92
Muncie	12.4	13.1	12.6	-5.33	-1.58
New Albany	5.5	4.7	5.1	17.02	7.84
New Castle	10.1	8.3	8.9	21.69	13.48
Peru	5.4	4.6	5.1	17.39	5.88
Richmond	24.4	24.8	23.7	-1.60	2.95
Seymour	2.7	2.2	2.5	22.73	8.00
South Bend	25.9	27.4	27.2	-5.46	-4.77
Terre Haute	25.8	24.4	30.0	5.74	-13.99
Valparaiso	8.4	8.1	8.5	3.70	-1.17
Vincennes	3.7	3.3	3.4	12.12	8.82
Wabash	6.7	6.4	7.2	4.69	-6.93
Indiana	**1855.7**	**1762.6**	**1781.3**	**5.28**	**4.18**

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United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967 = 100)

	United States				*Indiana*			
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Employment								
Nonagricultural Employment	April	135.6	135.2	136.9	April	111.1	111.0	114.7
Manufacturing Employment	April	94.5	94.0	98.6	April	77.4	77.1	84.8
Average Weekly Hours (No.)[2]	April	39.7	39.6	38.7	April	40.5	40.1	39.3
Average Weekly Earnings ($)[2]	April	348.57	346.50	325.85	April	407.02	400.60	382.00
Nonmanufacturing Employment	April	152.7	152.4	152.9	April	133.5	134.1	135.0
Unemployment Rate (%)	April	10.1	10.1	9.2	–	–	–	–
Unemployment–Married Males (%)	April	7.1	7.1	6.0	–	–	–	–
Production								
Bituminous Coal Production	March	135.8	145.6	168.8	–	–	–	–
Industrial Electricity Production	January	128.0	126.3	139.4	–	–	–	–
Industrial Electricity Sales	–	–	–	–	April	160.1	152.1	153.7
Manufacturing Production	April	142.9	139.9	138.7	April	137.5	132.4	138.9
Raw Steel Production	April	64.9	58.9	61.6	April	110.3	97.8	99.2
Construction								
Construction Activity–Total	March	313.0	318.0	286.5	April	212.9	213.7	174.0
Residential Housing Starts	April	116.0	126.6	70.9	April	81.7	69.8	61.2
Residential Expenditures	March	385.3	379.4	275.9	April	261.9	226.6	167.7
Nonresidential Expenditures	March	283.4	293.8	296.7	April	170.0	172.0	182.6
Public Expenditures	March	182.4	195.7	198.7	–	–	–	–
Public Works and Utilities	–	–	–	–	April	240.3	245.2	164.9
Other Indicators								
Personal Income Per Capita ($)	March	11375.7	11320.1	10880.7	1982:4	10,234.00	9,971.00	9,839.00
Passenger Car Sales (Thousands)[2]	April	762.0	822.0	669.0	–	–	–	–
Year to Date (Thousands)	April	2805.0	2043.0	2613.0	–	–	–	–
Passenger Car Registrations (Thousands)	–	–	–	–	March	13.3	11.0	14.8
Year to Date (Thousands)	–	–	–	–	March	32.9	19.6	33.9

[1] Current indicators are preliminary and subject to revision.
[2] Not seasonally adjusted

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Indiana Midyear Regional Reports

Robert J. Kirk	**Indianapolis**
Maurice Tsai	**Evansville**
Fay Ross Greckel	**Jeffersonville-New Albany (Louisville Area)**
Leslie P. Singer	**Gary-Hammond-East Chicago (Calumet Area)**
John E. Peck	**South Bend-Elkhart**
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William C. Dunkelberg	**Lafayette**

Indiana Midyear Regional Reports

In this issue . . .

The articles in this outlook edition of the *Indiana Business Review* describe how business activity around the state is beginning to pick up as the national economy enters the recovery stage. Most of the regional writers reported signs of recovery (recalls, expansions, and so on), even though these are not yet reflected in measures of business activity. The deep recession suffered by many of the state's durable goods manufacturers is also evident in the commentaries. Significant structural changes (that is, permanent decline of basic industries) are taking place in many of the regions, causing the recovery to be slower and less complete.

Nevertheless, we are happy to report some actual increases in business activity around the state rather than, as in the past, merely the hope that increases will start in the next quarter. Our writers generally display a mildly optimistic but cautious outlook for the near future. The second quarter growth in the U.S. GNP was considerably greater than expected which should give an added boost to the Indiana economy.

Richard L. Pfister

Indiana Business Review

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Indianapolis

Robert J. Kirk

Associate Professor of Economics, Indiana University-Purdue University at Indianapolis.

Economic recovery was signaled in the fourth quarter of 1982 when the IMEX, an index of leading economic indicators for the Indianapolis metropolitan area, turned upward. The initial signs of recovery were indicated by three of the four components of the IMEX—an increase in the money supply adjusted for inflation, an increase in residential building permits, and a reduction in new unemployment insurance claims. Unfortunately, the IMEX cannot forecast the strength or duration of the recovery.

Indianapolis should experience a moderate recovery because it has several interest-rate-sensitive manufacturing industries and interest rates are expected to remain relatively high. The long way to recovery is illustrated in Table 1 which compares the economy of the Indianapolis metropolitan area with that of the rest of Indiana and the U.S. Table 1 indicates that the expansion to the business cycle peak in Indianapolis was comparable to that of the U.S. (18.5 and 17.9 percent respectively). However, Indianapolis peaked much earlier than the U.S. Then Indianapolis contracted to a greater extent than the U.S. (–8.2 percent compared to –4.3 percent), primarily because of its greater dependence on the manufacturing sector. In that sector, Indianapolis contracted more severely than did the U.S. (–21.2 percent compared to –14.0 percent) because Indianapolis and the rest of Indiana are more dependent than the U.S. on the relatively cyclical durable goods component of manufacturing. Only partial restoration of the decline in manufacturing jobs is expected during the remainder of 1983, and the degree of restoration will depend on the relative contributions of cyclical and structural factors in the decline. The efforts of manufacturers to reduce costs during the recession—by closing plants and by substituting capital for labor in existing plants—will result in permanent job loss.

Expansion During Recession

About 88 percent of the job decline during the recession in Indianapolis was in the manufacturing sector; for the rest of Indiana the corresponding figure was 69 percent. When manufacturing declined in the rest of the state, so did nonmanufacturing activities. The same manufacturing-nonmanufacturing relationship operated in Indianapolis too, but *to a lesser extent* because of the more diversified composition and role of the Indianapolis economy in the state economy and in the hierarchy of urban areas. There were industries in which employment expansion occurred during the recession (December 1979-December 1982). The health services industry led, or more accurately dominated, the list; several hospitals and associated health care facilities expanded. Other industries that increased in employment during the recession were communications (telephone, radio, and TV), real estate, business services, and legal services.

What might we expect in employment expansion during recovery? One guide is to examine the employment growth patterns during the previous recovery, March 1975-March 1979. To identify trends in the Indianapolis economy, we compare an industry's *proportion of the change in total employment* during recovery with the industry's *proportion of total employment on average* over the recovery period. If an industry's proportion of the change in employment is greater than its proportion of employment over the recovery, then the industry's share of employment is increasing and a trend is suggested. This comparison is made in Table 2 for selected industries.

Typically, to forecast a recovery we focus on the cyclical durable goods indus-

Table 1

Employment Change, November 1973 = 100

	Peak	*Date*	*Trough*	*Date*	*Percent Change*	*Number of Jobs*
Total Employment						
United States	117.9	(8/81)	112.8	(12/82)	−4.3	
Indianapolis	118.5	(12/79)	108.8	(11/82)	−8.2	−32,500
Rest of Indiana	110.0	(3/79)	92.7	(11/82)	−15.7	−272,900
Manufacturing Employment						
United States	103.9	(7/79)	89.3	(12/82)	−14.0	
Indianapolis	102.5	(6/79)	80.8	(11/82)	−21.2	−28,500
Rest of Indiana	99.6	(3/79)	69.6	(11/82)	−30.1	−188,700

Table 2

Employment Expansion During Recovery, March 1975-March 1979

(1) *Industry*	*(2)* *Proportion of Change in Total Employment, 1975-1979*	*(3)* *Proportion of Total Employment on Average*	*(4)* *(2)/(3) in Index Form*
Manufacturing	19.4	25.8	75
Durables	17.1	18.3	93
Nondurables	2.3	7.5	31
Nonmanufacturing	80.6	74.2	109
Eating and drinking	7.2	5.0	144
Real Estate	1.6	1.2	133
Business services	6.1	2.5	244
Health services	5.4	4.6	117
Legal services	0.6	0.4	150
Social services	2.2	0.9	244

tries. These industries are important in terms of wages paid and business generated for other firms in the metropolitan area. However, as Table 2 indicates, even during recovery the durable goods industries' share of the change in employment (17.1 percent) did not equal their share on average over the recovery (18.3 percent).

A primary reason for Indianapolis' strength relative to the rest of the state is the number of service industries located here—business, health, legal, and social. Adam Smith said that specialization depends on the size of the market. With more than a million people in the Indianapolis metropolitan area, a high degree of specialization exists. Firms find it economically attractive to "contract out" for specialized services rather than provide them internally. Also, as the economy increases in complexity, there is a need to integrate increasingly differentiated and highly specialized functions. Information collection, interpretation, and dissemination as a basis for decision making become increasingly important. The growth of the business services industry—advertising, credit reporting, mailing, and computer and data processing—is a prime example of this process.

The growth in real weekly earnings of employed women over the past two decades has increased their labor force participation rates and, as a consequence, the demand for child-care services. Also, the growth in the number of separate households for single persons has increased the demand for child-care centers—a part of the social-services industry. Growth in social security payments and medicaid and medicare over the past decade have decreased transfers to elderly parents from their children. As a result the gain from living with children has been reduced and the tradeoff for elderly parents between setting up private households and playing a specialized role in their children's households has shifted in favor of privacy. As a consequence, there has been a shift from household provision to market provision in the forms of health services, social services, and "eating out" (eating and drinking industry). Thus, changes in the economics of the family have increased employment in the service industries.

Legal services employment has been a source of growth. Derek Bok, President of Harvard University, notes that Japan has less than 15,000 lawyers in total while the U.S. graduates 35,000 every year. He suggests a reason for this difference in the role of the lawyer:

"At bottom, ours is a society built on individualism, competition, and success. These values bring great personal freedom and mobilize powerful energies. At the same time, they arouse great temptations to shoulder aside one's competitors, to cut corners, to ignore the interests of others in the struggle to succeed. In such a world, much responsibility rests on those who umpire the contest. As society demands higher standards of fairness and decency, the rules of the game tend to multiply and the umpire's burden grows constantly heavier."*

Indianapolis is a place where part of the rules are made, trade associations are located, and lawyers agglomerate to "umpire" the contest.

As good middle-income manufacturing jobs are lost, new jobs are being created elsewhere. The employment trends in the service industries have been highlighted as one of the growing sectors. There are many high-paying, attractive jobs in the service industries; there are also many lower paying ones. Where the individual or entire household must rely on these jobs, earnings are low. Thus, a bifurcation may arise in the income distribution which may pose a challenge to the socioeconomic fabric of the Indianapolis community—and the nation—in the eighties.

* Derek Bok, "A flawed system," *Harvard Magazine*, May-June 1983:42.

Evansville

Maurice Tsai

Professor of Economics, University of Evansville.

Although the 1981-82 recession ended nationally in the fourth quarter of 1982, the Evansville economy reached its trough in the second quarter of 1982 and maintained a slow upward movement until the end of 1982. The first quarter of 1983 witnessed a recovery for both the national and local economies on a real basis. The rate of recovery was less than originally predicted, but it was a solid improvement. In terms of the Evansville Area Business Index, the quarterly index improved from 1982 second quarter's 101.51 to 104.29 in the first quarter of 1983 (see the accompanying Table). One factor that may offset this improvement, however, is the strike of the Whirlpool workers which began on February 17. This strike may be settled on June 5, but the local economy surely was adversely affected in the second quarter. Moreover, the Evansville economy lost a chance to expand its employment and income when the Whirlpool Corporation announced its plan to move the scheduled new line of refrigeration production from Evansville to Fort Smith, Arkansas. As soon as the strike is settled, the local manufacturing activities should be able to resume normal activity levels and share the national trend of economic recovery.

Now let us turn to the performance of various sectors in the local economy. The manufacturing sector activities declined by about 4 percent in 1982 from the 1981 level. In the first quarter of 1983, there was an improvement of about 3 percent over the last quarter of 1982. If the strike at Whirlpool had not happened, this improvement could have been greater. The trade and services sector experienced a steady but slow improvement in the second half of 1982, especially in September and December, but its index showed a steady decline in the first three months of 1983. The sales of new cars were higher than last year in January and February, but they dropped back to the 1982 level in March. The effect of the Whirlpool strike was felt on March's car sales and on a few other retail and services activities. Financial activities rose by about 4 percent in the period from December to February. There was a sudden but temporary drop in March's index due to lower lending activities. However, the index rebounded in April and the financial sector should see an overall improvement throughout 1983.

One distinct improvement in the local economy has been the strength in commercial and industrial construction. Unlike the still-stagnant housing activities, the construction projects for business purposes set a permit-value record last year. In 1983 the total permit value for business construction registered $84.5 million, of which about 75 percent was granted in the second half of 1982. As a result, the business construction index rose to a level almost double that of 1977, the base period of this index. Most of such projects were concentrated in the service sector, especially medical care and retail areas.

Payroll employment for the Evansville SMSA showed a decline of about 3 percent from December 1981 to December 1982. From December 1982 to March of this year, the payroll employment dropped another 4 percent; most of that decrease was related to the current Whirlpool strike. The employment figures for April and later months should show more adverse impacts. The unemployment rate for the Evansville area was 8.5 percent in July 1982 (below the national rate), but it rose to equal the national rate of 10.4 percent in October. The local rate stayed above 10 percent until March when the rate hit 11.1 percent, above the national rate of 10.3 percent.

The Evansville economy shared with other parts of the nation in the early months of the recovery, but it suffered a blow in the second quarter as a result of the local strike. However, the strike should be settled in early June and the local economy will have the opportunity to join the nation in its recovery in the second half of 1983.

Evansville Area Business Index
(1977 = 100)

Period	*Industrial Production*	*Trade & Services*	*Construction*	*Transportation*	*Finance*	*Employment*	*Composite Index*
Monthly Index							
1982							
July	104.10	100.70	107.98	91.50	101.06	102.28	102.25
August	99.71	102.79	110.29	94.04	102.37	102.72	101.87
September	103.88	105.45	119.44	91.88	102.88	102.58	104.91
October	103.50	102.22	116.74	91.04	102.10	102.29	103.30
November	99.14	103.52	114.03	90.37	100.80	101.78	101.86
December	103.90	105.23	117.71	88.87	105.51	102.65	104.61
1983							
January	103.58	103.90	122.14	93.54	106.74	102.34	104.73
February	108.56	100.90	123.25	90.15	105.93	100.82	105.07
March	103.39	100.69	128.44	92.35	97.46	97.29	103.07
Quarterly Index							
1983:1	108.24	101.55	91.68	95.88	101.86	103.93	102.80
:2	105.08	101.27	94.09	94.48	102.83	102.69	101.51
:3	102.56	102.98	112.57	92.47	102.10	102.53	103.01
:4	102.18	103.66	116.16	90.09	102.80	102.24	103.26
1983:1	105.17	101.83	124.61	92.01	103.38	100.15	104.29

Source: School of Business Administration, University of Evansville

Jeffersonville-New Albany (Louisville Area)

Fay Ross Greckel

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The first signs of economic recovery, noted last fall, strengthened and broadened during the winter and spring. Like the national economy, the Louisville area appears definitely to be experiencing an economic upturn, although the impact is still modest and has yet to spread to all corners of the local economy. As usually occurs in business cycles, employment gains lagged behind increases in sales and output.

The greatest improvement occurred in the sector that fell farthest during the past three years: the housing sector. As Table 1 shows, construction activity in this region averaged 50 percent above its 1967 level during 1979, then fell abruptly in 1980, reaching a low last summer of only 92 percent of the 1967 level. The turnaround occurred during the fourth quarter of last year and continued strongly into 1983, with the construction index climbing back to nearly 130 percent of the 1967 level by April.

Building permits for new dwelling units nearly tripled during the first four months of this year. Floyd and Clark Counties in Indiana issued building permits for 139 single family residences during this period, as well as for 8 apartment units and 8 new condominium units. This compares with only 73 single-family dwellings, 6 apartment units, and no condominiums for the same period in 1982. The building-permit increase in Jefferson County, Kentucky—which includes the city of Louisville—was even more dramatic; from 116 single family residences, 46 apartment units, and no condominiums in the first third of 1982 to 199 single family dwellings, 258 apartment units, and 43 condominium units in the first third of 1983. Combining all of the above, the three major counties in the metropolitan area issued permits for 655 new dwelling units in early 1983, compared with only 241 units in early 1982.

Table 1

Economic Indexes, Louisville Metropolitan Area, 1979-1983
(Seasonally Adjusted: 1967 = 100)

Annual Averages	*Industrial Production Index*	*Trade & Services Index*	*Construction Index*	*Financial Index*
1979	120.7	150.1	150.6	365.2
1980	107.1	141.1	122.8	390.2
1981	105.8	142.7	122.3	401.0
1982	98.4	143.7	97.7	456.6
Quarterly Averages				
1982:1	102.3	141.1	103.2	442.7
:2	100.4	143.9	95.6	442.9
:3	97.7	141.1	91.9	470.4
:4	93.2	146.9	100.2	470.4
1983:1	97.8	146.5	128.4	491.7
April	93.0	147.8	128.6	499.5

Source: Research Department, Louisville Area Chamber of Commerce.

Sales of existing homes registered similar gains. During the first five months of 1983, Jefferson County realtors sold 2,894 single-family houses—exactly twice as many as in the same period in 1982. The average selling price in 1983 was $53,700, only a few dollars higher than the preceding year. Residential sales seem to be gathering momentum, with new records set in May for both number and dollar value of homes sold. Housing sales rose a little less vigorously in the neighboring southern Indiana counties, where the number of residential units sold from January through May and the dollar value of sales both increased about 20 percent over the first five months of 1982.

Beginning last October sales of new cars and trucks also rose sharply. From January through April of this year 24 percent more new cars were sold in Floyd and Clark Counties than a year earlier; in Jefferson County new car sales increased 28 percent. This was the first sustained increase in new car sales in three years. Although the gains were widespread, sales of imported vehicles rose faster than those of domestic models. Having fallen so far, auto sales are still low despite the impressive gains. The 9,600 cars sold in the first four months of 1983 are far below the record 14,200 cars sold in the same months of 1978.

The recovery in other sectors is still spotty, but the effects are spreading as the months go by. Many businesses remain depressed, with some still teetering on the brink of bankruptcy. Yet other firms report recent sales and orders rising as much as 50 or 100 percent over their 1982 volume. Business at the Galleria, the new downtown shopping mall which opened last fall, has grown faster than its developers expected, and retailers throughout the area are optimistic.

Even employment and unemployment, which tend to lag a few months behind the turnaround point in sales and output, show a few signs of improvement. The unadjusted unemployment rate for the metropolitan area declined steadily from January through April, and April's 10.3 percent rate was the lowest recorded for this area since October 1981. There were an estimated 43,000 members of the metropolitan area labor force unemployed this April, compared with nearly 53,000 unemployed a year earlier.

However, since April is normally a month in which unemployment drops sharply, the 10.3 percent recorded unemployment rate overstates the actual improvement. In fact, the data in Table 2

show an April rise in unemployment once the predictable seasonal gains have been statistically removed. Nevertheless, the April rate was two full percentage points below the rate of a year ago, and the seasonally adjusted rate for the first quarter of 1983 was well below that of any of the last three quarters of 1982. As usual, the unemployment rates for Clark and Floyd Counties tended to be higher than for the area as a whole (see Table 2), but the 1983 improvement was evident there as well.

A reduction in unemployment, however, does not necessarily mean economic improvement. People may become so discouraged about job prospects that they stop looking for work and drop out of the labor force, thereby disappearing from the unemployment statistics as well. It is crucial to see whether or not employment growth accounts for the unemployment decline. A comparison of the employment trends and the unemployment rates shown in Table 2 suggests that some of the apparent improvement in unemployment is due to this discouraged worker phenomenon. We can see, for example, that while first-quarter unemployment rates were nearly identical in 1982 and 1983, total employment in area businesses declined by 11,000 jobs.

Despite this unfavorable comparison, there are some positive signs in the employment data. It appears that after declining more or less steadily for three years, metropolitan area employment reached its low point in late 1982 and began to climb slowly thereafter. Particularly encouraging was the upturn in manufacturing employment, which has accounted for about two-thirds of the job losses since 1979. The Clark-Floyd employment picture is less clear, with total employment changing very little since mid-1982, apart from normal seasonal fluctuations.

Looking ahead, the recovery should continue and should expand, barring strong negative developments on the national scene. Several manufacturers have announced partial recalls, and some, like General Electric, have said they expect no further layoffs. At least three new substantial businesses have opened in the area, with projected employment levels totaling 1,400 workers within a year or two.

Nevertheless, one cannot look ahead with unbounded optimism. The scars of this severe recession will be with us for some time to come. While the economic upturn has already benefited many, all the public and private social service agencies have seen a sharply increasing demand for their services during the past several months. The accumulating strains on the long-term unemployed and on others adversely affected by the recession or by cutbacks in government programs is manifested in rising rates and severity of child abuse and similar social problems.

The recovery itself is still a little delicate. The presently strong sectors—construction, real estate, and auto sales—are highly interest-sensitive, and there seems little doubt that interest rates will rise in the months ahead. So long as the rise is moderate, as now seems likely, these sectors should continue to recover, nationally as well as locally. That will give an additional boost to local manufacturing em-

Table 2

Louisville Area Employment and Unemployment, 1979-1983[1]
(Seasonally Adjusted: 1967 = 100)

Louisville Metropolitan Area[2]	*Total Nonfarm Employment*	*Manufacturing Employment*	*Unemployment Rate (%)*
Annual Averages			
1979	402,700	109,400	5.2
1980	391,700	100,300	7.9
1981	383,400	96,500	9.0
1982	367,800	86,700	11.7
Quarterly Averages			
1982:1	375,500	93,300	10.6
:2	370,400	88,300	12.6
:3	366,000	85,600	11.3
:4	359,700	79,500	12.5
1983:1	364,400	87,600	10.7
April	363,500	83,400	11.7
Clark & Floyd Counties			
Annual Averages			
1979	46,800	12,100	6.3
1980	47,100	11,800	8.3
1981	48,200	12,300	10.6
1982	44,500	10,400	13.1
Quarterly Averages			
1982:1	44,800	10,900	13.9
:2	44,700	10,600	13.4
:3	44,000	10,400	11.7
:4	44,500	9,800	13.7
1983:1	44,200	9,800	12.1
April	44,200	10,000	10.7

1. The employment data refer to establishments located within the area cited; the unemployment data refer to residents of the area.

2. Includes Floyd and Clark counties in Indiana, and Jefferson, Oldham, and Bullitt counties in Kentucky.

Sources: Indiana Employment Security Division; Kentucky Department for Human Resources.

ployment, since many of our manufacturers produce home- or auto-related goods.

Still, many of the jobs lost in the last three years will not be recovered. Business firms have folded or left the area; others have streamlined their operations or substituted capital for labor. (General Electric, for example, recently opened a new line with robot assemblers.) While this is a common result of recession, the permanent job losses seem much greater this time, and experts predict that the alternative employment opportunities that will arise will tend to pay lower wages than the jobs lost. The current business cycle upswing may restore less than half of the lost jobs. The rest will require the more challenging path of long-term economic growth, worker retraining, occupational changes, innovation, attraction of new firms from outside the area, and the successful establishment of new local businesses. It is encouraging to note that the last two developments are already occurring.

Gary-Hammond-East Chicago (Calumet Area)

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In our midyear correction we are forced to make a downward revision of about 6 percent. This is painful but appears inevitable based on our latest computer runs. The unprecedented downturn in the export sector (manufacturing plus non-residential construction) of over 17 percent in a single year, and a long recession which wiped out over 45 percent, or nearly half, of our key regional industries in just two and a half years (from May 1979 to January 1983) has caused this region to play catch-up from very far down. In all postwar recessions, except 1970, the industrial sector recovered about 40 to 42 percent of output lost in the downturn. If this were a normal cyclical recovery, based on an average of the four past recessions, our predictions of seven months ago would have been slightly pessimistic. As it turns out, we find that the export sector is recovering recession losses at an annual rate of 21.43 percent, which, even in the best of circumstances, will not raise export sector employment by more than 5.9 percent by year's end and by no more than 9.05 percent by the end of 1984. We shall have about 20,000 fewer high-paying jobs than we did at the 1981 low point and about 25,000 fewer than we should have reached in a normal cyclical recovery. It is quite likely, therefore, that almost 11,000 high-paying jobs will not be recovered at any point during the present cyclical upturn, if ever.

The private domestic sector has fared better. Our predictions of seven months ago are only slightly off target and the long-run picture indicates no permanent loss, though the gains of the past several decades will slow to a crawl.

Only health care and hospital employment showed uninterrupted and significant gains, growing at a 3.588 percent cumulative rate with a payroll growing at a 13.02 percent rate, more than offsetting the payroll loss in primary metals from 1974 to 1982.

Clearly what the region is undergoing is not simply a cyclical aberration, nor is it a gradual secular decline. Deep structural changes are in the offing, many of which we do not yet fully understand. The regional economy will not be revitalized by endless conferences or political bombast. A long, painstaking investigation is required.

A few possible answers emerge. Both the 1974 and the current recession were preceded by violent and unprecedented price shocks. The six-months average price changes preceding the 1974 and the 1982 recessions were, respectively, 22.4 percent and 11.5 percent for capital goods; 27.4 percent and 17.1 percent for intermediate industrial materials; and 38.9 percent and 19.3 percent for crude materials. Each price shock was followed by precipitous declines which led into a recession, induced by monetary countervention.

Internationalization of industrial and primary metals markets made it difficult to absorb domestic wage increases in excess of marginal product. The simple economics is that wage levels are neither high nor low in absolute terms. Wages in the long run must equal marginal physical product, multiplied by marginal revenue (price effect). Marginal physical product depends, at a given capital utilization, on the efficiency of labor (including managers, engineers, and so on). Marginal revenue is governed by global markets. Thus, steel imports undercut steel's ability to compensate for lower marginal physical product by higher marginal revenues. The direct loss of jobs to imports is a relatively minor annoyance compared to the impact of an open market on marginal revenue, particularly if our rivals subsidize industrial wages. If we invoke tariffs, we ask the American consumer to subsidize steel wages, which are in excess of marginal product. The problem of American steel in an open economy, with extensive wage subsidies by foreign producers, is very grave. The structure of steel wages allows little flexibility at the margin. In global industrial markets, wage contracts may have to be drastically revised because productivity tends to fall proportionately more as capacity utilization declines while contractual wages tend to decline proportionately less (the reverse relationship holds when utilization rates rise). Moreover, the steel companies greatly overestimated the relief from union "give backs."

Other factors contributing to a decline in steel demand are a slowdown in disurbanization and a possible permanent shift of emphasis from fiscal remedies to monetary countercyclical policies. The latter is a philosophical stance, because nonreversible fiscal policies tend to alter the ratio of public to private goods whereas monetary measures tend to be more neutral—a sound position but not particularly favorable to steel. Also, a change in tastes is gradually converting the automobile from a symbol of conspicuous consumption and social rank to an aging instrument of transportation.

Employment, Income, Payroll, Spending, Housing (Calumet Area)

	1981 High	*1983 Low*	*1983 June*	*1983 September*	*1983 December*	*1984 June*	*1984 December*
Total Employment							
Index January 1978 = 100	252.4	217.9	223.6	228.1	229.3	232.8	241.9
	(109.83)	(94.82)	(97.3)	(99.26)	(99.78)	(101.3)	(105.3)
Export Sector (Manufacturing and Construction)							
Index January 1978 = 100	108.50	80.6	83.8	84.2	85.4	88.8	87.9
	(96.10)	(71.39)	(74.2)	(74.6)	(75.6)	(78.7)	(77.6)
Steel Mills							
Index January 1978 = 100	63.80	48.2	50.32	51.39	51.02	53.02	55.89
	(99.53)	(75.19)	(78.5)	(80.2)	(79.6)	(82.7)	(87.2)
Steel-Based Manufacturing							
Index January 1978 = 100)	25.70	19.54	19.91	20.32	20.64	21.51	21.326
	(80.82)	(61.32)	(62.6)	(63.9)	(64.9)	(67.7)	(67.1)
Private Domestic Sector							
Index January 1978 = 100	113.20	107.3	109.79	111.88	112.97	115.92	116.94
	(110.98)	105.2)	(107.6)	(109.7)	(110.6)	(113.6)	(114.6)
Public Sector							
Index January 1978 = 100	30.80	30.1	30.32	30.38	31.76	32.12	32.25
	(99.35)	(96.8)	(97.8)	(98.0)	(102.5)	(103.6)	(104.0)
Health Care							
Index January 1978 = 100	15.9	17.96	18.81	19.12	19.64	20.08	20.31
	(118.7)	(132.9)	(139.5)	(141.8)	(145.7)	(148.9)	(150.6)
Personal Income*	7.13	7.05	7.39	7.43	7.53	7.96	8.22
Total Payroll*	4.59	4.92	4.98	5.09	5.13	5.38	5.59
Export Base Payroll*	2.89	2.82	2.95	3.07	3.12	3.31	3.47
Personal Consumption Expenditures*	5.44	5.46	5.62	5.73	5.89	6.19	6.39
Expenditures for Food*	1.18	1.19	1.16	1.26	1.35	1.29	1.37
Housing Units, Annual Rates	342	328	469	454	451	529	521

*In billions per annum

Finally, we note that we developed estimating equations for personal income and some expenditure categories. These figures, which we shall view with caution, may give a better picture of money flows than payrolls because of the large public and private transfer components.

South Bend-Elkhart

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It is clear that the South Bend and Elkhart area economies are participating in the national recovery of 1983. Several factors suggest that the prolonged period of local recession—by far the longest period of economic malaise to affect the area since the 1930s—is at last in the process of reversal.

Tables 1 and 2 give various indicators of local economic activity for the South Bend and Elkhart communities. The figures contained in the tables are seasonally adjusted and, with the exception of the unemployment rates, are index numbers expressed as a percentage of 1967 base-year values. In each table, comparative index numbers are averaged for the years 1982 and 1978, the last full year of somewhat "normal" activity experienced locally. Index numbers are also given for a March 1983/March 1982 comparison.

South Bend

Comparing average 1982 indicators to those of 1978 highlights the severity of the recession on the South Bend economy. Noteworthy are the 13.6 and 66.2 percent declines in the manufacturing employment and help wanted indices. Declines of 43.5, 58.9 and 79.0 percent, respectively, in car and truck sales and in new housing permits issued through 1983 also reflect South Bend's share in the nationwide depression in the auto and housing markets.

However, the March 1983/March 1982 comparison of several indicators—particularly nonmanufacturing employment, the unemployment rate, and new housing permits issued—points to improvement in the housing industry and employment in the area. In April, the unemployment rate dropped to 8.3 percent of the work force, down from 9.3 percent in March and from 10.3 percent in April of last year. Though manufacturing employment continues to fall, nonmanufacturing employment is steadily increasing.

Aside from the rather substantial improvement noted in recent employment/unemployment data, a number of other positive events lend weight to the suggestion that the South Bend economy will continue to strengthen. In the short term, some 800 jobs will be filled within the next twelve months as a result of AM General's successful efforts to win the U.S. Army's "Hummer" contract. First-year funding of a potential $1.2 billion project will amount to some $60 million. Given various options to expand the initial order for units designed to replace the fabled "Jeep," up to 2,000 jobs could be created over the next five years in the Hummer production. At the same time, AM General continues to increase its other military and postal vehicle production.

Moreover, as a result of business development efforts (principally through the community's "Project Future" thrust), thirty-three firms have located or expanded in South Bend and thereby added 1,000 local jobs. In addition, Project Future recently announced Control Data Corporation's decision to establish the latest of its

Table 1

Selected Indicators for South Bend
(Seasonally Adjusted Indexes: 1967 = 100)

Indicator	*1982 Average*	*1978 Average*	*% Change 1978-1982*	*March 1983*	*March 1982*	*% Change March '82-March '83*
Employment Data[1]						
Total Employment	112.2	113.5	−1.1%	109.7	108.8	+0.8%
Manufacturing Employment	79.4	91.9	−13.6%	74.9	80.8	−7.3%
Nonmanufacturing Employment	132.2	127.0	+4.1%	131.5	126.2	+4.2%
Help Wanted Advertising	56.1	166.2	−66.2%	58.4	58.1	+0.5%
Unemployment Rate	10.0	5.8	n/app	9.3	10.9	n/app
Utilities[2]						
Industrial Electricity Sales	125.2	107.1	+16.9%	125.8	114.7	+9.7%
Commercial Gas Sales	118.6	122.3	−3.0%	94.5	129.5	−27.0%
Industrial Gas Sales	101.0	89.0	+13.5%	70.4	104.4	−32.6%
New Passenger Car Sales[1]	76.3	135.1	−43.5%	52.2	63.7	−18.1%
New Truck Sales[1]	137.7	335.1	−58.9%	134.4	122.9	+9.4%
Housing Construction Data						
Estimated Value of Permits[3]	116.3	400.0	−70.9%	246.3	107.7	+128.7%
Number of Permits Issued	33.6	159.7	−79.0%	66.0	31.0	+112.9%
Average Value Per Permit	370.3	265.2	+39.6%	396.0	379.7	+4.3%

[1] South Bend SMSA
[2] City of South Bend
[3] St. Joseph County excluding the cities of South Bend and Mishawaka
Source: Bureau of Business and Economic Research, Indiana University at South Bend

Table 2

Selected Indicators for Elkhart
(Seasonally Adjusted Indexes: 1967 = 100)

Indicator	*1982 Average*	*1978 Average*	*% Change 1978-1982*	*March 1983*	*March 1982*	*% Change March '82-March '83*
Employment Data[1]						
Total Employment	129.1	152.3	−15.3%	134.2	125.1	+7.3%
Manufacturing Employment	104.4	136.2	−23.3%	117.9	107.6	+9.6%
Nonmanufacturing Employment	250.2	262.7	−4.8%	255.2	243.1	+5.0%
Unemployment Rate	10.3	4.9	n/app	8.3	11.9	n/app
Utilities[2]						
Industrial Electricity Sales	165.3	150.4	+9.9%	176.8	170.2	+3.9%
Commercial Gas Sales	166.8	166.0	+0.5%	126.9	181.1	−30.0%
Industrial Gas Sales	250.5	240.3	+4.2%	216.2	287.9	−25.0%
Housing Construction Data[3]						
Estimated Value of Permits	101.4	313.4	−67.6%	188.8	74.0	+155.1%
Number of Permits Issued	44.3	184.3	−76.0%	70.2	36.0	+95.0%
Average Value of Permit	241.2	180.2	+33.9%	337.1	235.6	+43.1%

[1] Elkhart SMSA
[2] City of Elkhart
[3] Elkhart County excluding the cities of Elkhart and Goshen
Note: Elkhart construction data has a base year of 1970 = 100.
Source: Bureau of Business and Economic Research, Indiana University at South Bend

Business and Technology Centers in downtown South Bend. The BTC concept is designed to provide support and assistance to viable small business entrepreneurs as they establish their operations. The South Bend BTC is to be operational within a year.

Elkhart

In Elkhart, the comparison of indicators averaged for 1982 and 1978 in Table 2 illustrates the extent to which the Elkhart economy was burdened over the past four years. The unemployment rate more than doubled, and manufacturing employment fell 23.3 percent. New housing permits issued dropped an average of 76 percent.

There is no doubt, however, that the Elkhart economy was on the mend in the first quarter of 1983. In April, unemployment dropped to 6.8 percent—the second lowest seasonally adjusted rate among the state's thirteen SMSA's, down from 8.3 percent in March. In April 1982, the unemployment rate stood at 11.0 percent.

The principal impetus to the Elkhart recovery has been the national rebound experienced in the recreational vehicle industry. Thirty-five percent of the RV industry is located in the Elkhart area. Wholesale deliveries nationwide were up from 50 to 60 percent in early 1983 over comparable months in 1982.

Elkhart will also benefit in the recovery of '83 from the fact that a relatively small proportion of its manufacturing activity is in the slower-rebounding capital goods sector. In addition, the local manufactured housing industry(which employs nearly 10 percent of the area's manufacturing labor) is recovering well, along with the nation's conventional housing sector.

Outlook

Referring to what we felt were local prospects for 1983—those published in the November/December 1982 *Indiana Business Review*—the then tentative national recovery suggested an increase of approximately 3 percent in local employment by the third quarter of the year. This is a reasonable estimate, though possibly too conservative with respect to Elkhart, as a midyear outlook is posted. Given the moderate nature of improving national conditions, a continuation of this level of improvement throughout 1983 and into early 1984 is expected. For South Bend, at least two years of recovery are required to regain employment lost during the recession. However, Elkhart's history of more rapid recovery from recessions, along with the very positive signs of improvement already, suggest that one full year may be sufficient to permit a return to more normal conditions. In either case, the news from the North is better than it has been in the last several outlook reports.

Terre Haute

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After three and a quarter years of sliding and tumbling, economic conditions in the Terre Haute area bottomed out in the first quarter of 1983. Recovery to date has been modest, but the outlook has improved.

With the closing of the CBS record and tape plants, and the J.I. Case shutdown for inventory reduction, unemployment in the Terre Haute metropolitan area reached 15.5 percent in January. With the reopening of J.I. Case, and with the labor force declining by 800, the area unemployment rate improved to 13.6 percent by March. Area employment increased by 400 in April, and probably increased further in May and June.

For the first time in years, announcements of plant expansions, worker recalls, and new industry have been more numerous than stories of closings and retrenchments. CBS-Sony announced that their plant for producing compact audio digital discs will be located in Terre Haute. Part of the existing CBS facilities will be utilized, along with some new construction. They anticipate that production will commence in 1984 with an initial payroll of 200. A small local firm, Applied Computing Devices, announced, first, agreement for a joint venture with Rose-Hulman Institute of Technology, and second, that it will construct and move into substantially larger quarters. International Minerals and Chemicals announced that it had begun work on an animal laboratory that will initially employ thirty people. This strengthens the likelihood that all IMC research facilities will be brought to Terre Haute. Hills Department Stores will take over the two stores occupied by Woolco. Building permits place the cost of renovating the Plaza North store and expanding the Honey Creek store at $1 million. Four IGA supermarkets closed, but reopened quickly as Standard or No Frills. However, the impending closing of Zenith Radio, with the loss of 600 jobs, not only presents Paris, Illinois with very bad news, but creates problems as well for the Indiana side of the border.

The past year was certainly a dismal one for Terre Haute, but perhaps not quite as dismal as initially reported. The area employment estimate in December 1982 was 54,600; incorporation of a newer benchmark led to a revised estimate of 58,000. Employment in April 1982 is currently estimated to have been 60,500; a year ago the preliminary estimate came out at 57,300. Thus employment levels last year were higher, and declines in employment from the October 1979 cyclical peak were somewhat less severe, than initially reported. Without the new benchmark the drop in employment from peak to trough would have been about 23 percent; it now appears to have been 18.8 percent.

Further grounds for optimism exist. Because of declining interest rates and the greater availability of mortgage financing, first-quarter sales of existing homes increased 31 percent over the depressed levels of a year ago, although this does not yet quite bring the level up to that of two or three years ago. Nonresidential construction permits, which rose in value the second half of last year, continued at more active levels in 1983. Permits for new residential construction have been running at or below last year's depressed levels, and

are off 40 percent from 1982, and 60 percent from 1981. But a proposed planned unit development may change that dramatically. Automobile sales and sales of other big ticket items have picked up. Lower interest rates and the PIK program improved the outlook for area farmers, providing the prospect of firmer prices and lower costs. However, payment in kind for not producing crops lowers demand for locally produced herbicides, pesticides, and fertilizers. Farm-land prices have apparently ended a two-year slide, and farmers are beginning to purchase a few agricultural implements.

Even though all the indications are that recovery is underway, the local economy is in a rather depressed condition and has very serious long-run problems. The structure of the local economy, with its major emphasis on services and very little on durable goods manufacturing, is such that it had been resistant to cyclical swings in the economy. The loss of jobs since 1979 has been not so much from layoffs as from permanent plant closings.

The loss of the CBS record and tape plants, by itself, is a terrible blow. A recent issue of *Sales Marketing and Management* (April 25, 1983: 91) put employment at the facility at 3,500, and annual shipments at $300 million. Vigo County ranked first in the nation in that industry, with New York and Los Angeles a distant second and third. Although the new digital disc provides a marked improvement in sound quality over conventional records and tapes, and although employment in the new facility should grow, it is extremely unlikely that it will ever provide employment or payroll approaching that of the old plant. Only 22 percent of the Terre Haute SMSA establishment employment is currently in manufacturing, and one wonders if all the multiplier effects of the loss of export base have been realized.

Richmond

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The local economy is recovering from the deepseated recession. Wholesale and retail trade is picking up as consumer real personal income rises. The additional tax cut scheduled for July 1 will give more purchasing power to consumers and a much-needed boost to Wayne County. Business confidence is also on the rise. This, along with declining rates of interest, should lead to sustained noninflationary growth. The last two quarters of this year, in particular, should be very favorable to the business community.

Unemployment, however, will remain relatively high because of structural changes within the state and national economy. The change in the structure of labor demand with respect to the kinds of jobs that the economy offers will certainly affect the local economy, given its sensitivity to the national economy. Technological change, the development of new industries, the demise of old ones, the unprecedented entry of women into the labor force, and the changing economic role of different regions in the country will mean that new kinds of jobs need to be done and that many old ones will cease to exist. The new jobs often require different skills and educational backgrounds than the old ones and are frequently located in different geographic regions. That is why, to a large extent, we have the constant flight of business and people from Indiana, and Richmond is no exception.

The days of high hourly paying jobs are over in Richmond. The foreign competition is intense, and we may lose our comparative advantage if we do not moderate wage demands and take innovative measures. It is vital that decision makers follow this path in order to accelerate development of the local economy.

Fort Wayne

Thomas L. Guthrie

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The thrust of the November/December 1982 *IBR's* economic forecast for 1983 for the Fort Wayne area economy remains intact—"a mild upturn by year-end 1983." Although there are scattered signs of increased economic activity reappearing in the economy, the trend in total payroll employment remains unfavorable. Employment has hovered in the 157,000 range for the first four months of 1983, and the final step in the phase-out of International Harvester truck production in July will shrink employment another 2,200. There is no chance that the area's fledgling economic upturn will generate a sufficient increase in employment to offset the scheduled decrease; therefore, the cyclical low in area employment is forecast to occur this summer.

Employment Details

Area employment has been declining for more than four years. In April 1983, seasonally adjusted payroll employment was approximately 29,000 (15.7 percent) less than its previous cyclical peak of 185,200 in March 1979. The only bright spot in employment is that the most volatile sector—durable goods—hit a cyclical low of 33,300 last September. Durable goods employment in April stood at 34,400. Even though this sector's employment is increasing, the growth rate is not sufficient to offset the scheduled loss of the 2,200 IH employees in July, and will do nothing to offset the 18,000 jobs lost in the sector from March 1979 to the September 1982 low.

The extraordinary length and severity of the downturn in this sector of "basic" employment does not auger well for "non-

basic" employment. For example, employment in wholesale and retail trade continues to decrease. Precisely because these decreases continue to offset the type of increase noted above, total payroll employment has remained trendless for the first four months of 1983.

Signs of Increased Activity

Although total payroll employment remains trendless, other proxies of overall economic activity in the Fort Wayne area are now positive. For example, initial claims for unemployment insurance (in the Fort Wayne and Auburn offices) have been halved since last fall, falling from above 10,000 per month to 4,911 in April.

Through April of 1983 new car sales increased 8.7 percent, from 2,728 to 2,967, for the sixteen of the nineteen members of the Fort Wayne New Car Dealers Association reporting.

Through April of 1983, the number of building permits issued for single-family housing in Allen County increased 227 percent, from 38 to 121. The percentage increase is phenomenal precisely because the base was so low. For a better perspective it is helpful to note that for the first four months of 1978, 508 permits were issued.

As just noted, residential construction and new car sales, the traditional leaders of a cyclical recovery, have improved in the Fort Wayne area, just as they have done nationally.

In contrast, total payroll employment for the area has not increased. (Total payroll employment nationally bottomed in December 1982.) More sensitive measures of marginal changes in employment, such as amount of overtime and length of average work week, have probably increased for the Fort Wayne area as they have nationally, but area data are not available.

For the Fort Wayne area to share meaningfully in the ongoing national economic recovery, total employment must expand, but the forecast is for additional slippage. After the cyclical low is established this summer, the long, arduous climb back to the previous peak of March 1979 will begin.

Muncie-Anderson

Robert R. Jost

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The 2.5 percent growth in real GNP for the first quarter of 1983 was the largest gain in two years, but this welcome news is dampened by the realization that the GNP for the first quarter of 1983 is almost the same as the *revised* first-quarter number for 1979. In short, the American economy has experienced more than three years of sputtering starts accompanied by a recessionary recidivistic tendency, yielding an abysmal track record of no growth. For Indiana, the story is far more sobering; according to IU's econometric model of Indiana, it will require four years of strong recovery to get Indiana's real wages and salaries back up to 1979 levels.

However, better times are in the wings! As of the end of May, there was substantial evidence that the U.S. recovery would turn out to be more robust than expected—it may not warrant the accolade of "boom," but neither will it be as "tame as a lamb." The IU econometric model forecast of 2.73 percent real GNP growth for the nation in 1983 (this translates to almost 5 percent growth if measured from 1982:4 to 1983:4) appears quite close to numbers I generated using a much simpler eclectic opportunistic model. Additionally I assume, as does the IU econometric forecast for Indiana, that Indiana's recovery will not only lag behind that of the nation but, contrary to previous cyclical rebounds, will also accelerate at a slower pace than the nation's.

As of the end of May there is no recovery euphoria in the Muncie-Anderson SMSAs, but there are signs of a turnaround. The *Muncie Business Index*, compiled by Ball State's Bureau of Business Research, moved up rather sharply in February for the largest percentage rise in over a year. February's economic weather, however, seemed more spring-like than that of March or April, thereby perhaps stimulating an upward racheting of the trade and finance sectors. Still, the manufacturing component of the *Index* has enjoyed four successive increases following declines in seven of the previous nine months—a harbinger of better times ahead. Unfortunately, the composite *Index* went flat in March, the latest reading available, which again reflects adverse weather, although to a lesser degree.

Delaware County housing statistics parallel the national rebound in housing. During 1982 deed recordings declined 13.7 percent. This marked the fifth successive annual decline in deed recordings—the lowest level since tabulating deed recording totals commenced in 1959 (see **Figure 1**). First-quarter deed recordings are up 47 percent over the comparable 1982 quarter. As the graph indicates, the numbers are lilliputian by previous years' standards, but the turnaround is real. Housing completions in 1983 also reached their lowest depth since 1970, but here again a turnaround is in the making. One quality contractor who barely kept his crew going in 1983 has signed contracts that will carry him well into 1984. A very few contractors are again building units not yet sold. According to a study conducted by the Federal Home Loan Bank, the vacancy rate was lower in 1982 than in 1981, but Fred Miltenberger Associates greeted the figure with a jaundiced eye, and believe they have zeroed in on the source of the error. The ubiquitous For Sale and For Rent signs that protrude from front yards belie such a finding, as does the continued out-migration from the Muncie-Anderson SMSAs and surrounding counties.

In manufacturing, many of the high wage jobs have left the area. In the Muncie SMSA employment in manufacturing declined 37 percent over the past two decades, and much of this loss could be attributed to a reduction of some 3,000 employees at Warner Gear and the loss of the Marhoefer Packing Plant that had employed as many as 1,100 workers in 1962. The Marhoefer jobs are lost for good, but Warner Gear, producer of automotive, truck, and marine components, is currently on the mend following contract concessions by the local union in January.

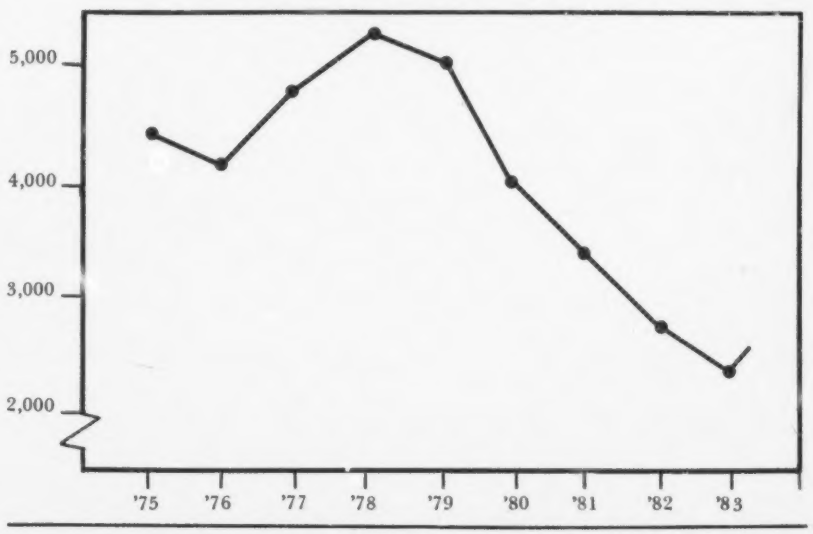
For the first time in four years all laid-off employees have been called back, and new hirings have brought the work force to more than 2,000. Employment at Muncie Chevrolet, on the other hand, does not yet reflect the current improvement in auto sales. As of July of 1981, Muncie Chevrolet employed 3,000 workers, but was down to 1,300 workers as of this May. The transfer of the forging operations to another plant accounted for roughly 10 percent of the job decrease. Employment at Guide at Anderson is up to 4,750 employees; they have added 640 workers since the beginning of the year while 540 remain on layoff. Delco, more of a problem child than the other GM division, currently employs 8,900 workers, having recalled 1,200 workers since the start of the year, but has 3,400 yet on layoff; thus it is not surprising that the seniority call-back list dates back to August of 1966. Since GM has exported many of those jobs to newer plants in the South, many of those 3,400 workers will never be called back. Nevertheless, additional call backs can be expected in both Anderson and Muncie as auto sales pick up steam during the balance of the year.

Westinghouse of Muncie produces huge power transformers for electrical utilities, and with power generation at its lowest growth rate since the Great Depression, and the transformer demands of nuclear plants almost nil, its labor force is now little more than half what it was in 1969. Additionally the partial consolidation of its marketing, engineering, and computer departments with a Pennsylvania facility will deprive Muncie of perhaps 45 to 50 additional well-salaried personnel this summer.

The impact of the loss of these many thousands of jobs is not confined to the Muncie-Anderson SMSAs, but also affects the more rural surrounding counties. For example, the 1980 census reveals that 31 percent of the residents of Blackford County and 29 percent of the residents of Henry County work outside the county in which they live. Obviously many of these residents work in the Muncie-Anderson SMSAs as do many farm operators; more than half of these do not list farming as their primary occupation.

Figure 1

Deed Recordings, Delaware County, 1974-1982



Many of the small manufacturing firms that are scattered over the Muncie-Anderson areas have experienced difficulties similiar to those of the large corporations in recent years. For example, employment in Muncie's manufacturing firms in primary and fabricated metals has followed the pattern shown in Figure 2.

Several firms, representing a significant portion of manufacturing employment, were interviewed in September 1982 and again in May 1983. Two of the firms that had reported what they thought was a bottoming out of their employment totals in September, subsequently experienced sharp declines in their work forces. For most of the firms interviewed, times were lean indeed. Many of them reported union contract concessions on wage increases, shorter work-weeks, and work rules. Complaints of intense domestic and foreign price competition were legion. A producer of high carbon steel wire used by the communication and public utility industries complained of competition from Spain, Korea, and Argentina, but nevertheless has managed to sustain operations by meeting replacement demand as utility wire inventories were drawn down and some integrated steel companies ceased producing the unprofitable high carbon steel wire. This firm, like several others, reported that in past business cycles they tended to lag several others, reported that in past business cycle they tended to lag the upturn by about six months. Three of the firms reported increased bid requests and some firming of orders for May.

The story is no brighter for the myriad tool and die shops that frequent the Muncie-Anderson landscape. Those firms best able to minimize their losses do so by diversifying away from the automotive industry. One capable entrepreneur felt fortune smiled on him when he landed a contract tied to repackaging Tylenol. Layoffs in the tool and die business continued into April. Management personnel were not optimistic for the near term.

Over recent decades Ball State University and the public schools have accounted for much of the growth of the government sector of the local economy, and Ball Memorial Hospital and a cluster of shopping centers account for much of the growth of the service and trade sectors, offsetting some of the long-term decline in manufacturing. Obviously both BSU and BMH provide many basic jobs to the community, and service and receive income from the more rural adjacent counties in addition to the local area. Here too, how-

ever, the outlook is not necessarily onward and upward. Both the declining birth rate and out-migration have resulted in decreased enrollment in the public schools in the entire area and a substantial number of closings. Ball State student population grew at a phenomenal 10 percent annual rate between 1955 and 1965, but perceptibly slowed thereafter. Undergraduate enrollment appears to have flattened out in the early 80's at about 14,500. Given the demographic forces at work and the IUPU satellites ringing the area, Ball State will be fortunate to garner the forecast 12,000 undergraduate students in 1988. In short BSU will no longer help to offset the decline in manufacturing jobs in the future. The tentative and preliminary IU demographic projects for Delaware and Madison counties call for sharply negative growth rates into the 90's and represent a significantly downward revision of previous population estimates for the area. Jackson and Masnick's dire demographic projections for the East North Central states for 1990 were partially based on the region's lagging manufacturing output and seem especially apropo to the Muncie-Anderson SMSAs.

"What is worse, the region's lagging industrial output threatens to cause a serious and ongoing loss of jobs. The massive capital investment necessary to turn these economic trends around is hampered by the region's high wages. It is entirely possible, therefore, for a worsening situation in the automobile, steel and other heavy manufacturing industries to push up out-migration rates of young and middle-aged workers even further. Fast growth elsewhere will most likely come at the expense of the East North Central States."*

The loss of high-wage manufacturing jobs is awesome. Between April 1977 and April 1983 the non-agricultural labor force of Anderson decreased from 50,300 to 42,200, whereas Muncie declined from 49,300 to 44 400. During the same period, the number of employees in Anderson engaged in manufacturing decreased from 25,400 to 16,500—a whopping 35 percent. The comparable figures for Muncie were 15,000 to 8,800—a much smaller absolute decline, but still a 35 percent decrease. At the same time, non-manufacturing remained virtually unchanged at 25,000 in Anderson and 35,000 in Muncie during the same time period. In short, the job loss has been primarily in high wage manufacturing jobs in both areas and nonmanufacturing jobs have remained relatively unchanged. If one is inclined to say that Muncie's employment situation has improved vis-a-vis Anderson's, it is primarily because a much greater percentage of Muncie's labor force is employed in nonmanufacturing.

Both the Muncie and Anderson areas have been working to improve their downtown areas. In this respect Anderson's performance has been nothing short of stellar, given the wretched trauma of its economic experience. Two years ago the Anderson downtown looked almost like a western ghost town—vacant buildings appeared to be its stock in trade. New high-rise buildings and a large parking garage have much improved the downtown silhouette, and small retail businesses have filled most of the vacancies. Anderson can boast of its planning task force whose members not only work arduously at their jobs but coordinate their joint efforts carefully. It requires little imagination to sense their disappointment at coming so close to landing the Blue-Cross Blue-Shield facility which would have added approximately 400 service jobs in the heart of the downtown area.

Muncie planners are now in the throes of proposing a downtown parking garage, some twenty-five years after Dr. Hannaford's *Base Resource Study of Muncie* recommended building interstate cloverleafs exiting into parking ramp garages in order to buoy up what was then a viable downtown shopping area.

These efforts at improving both cities are just one more sign of the area's slow turnaround toward recovery.

* Gregory Jackson and George S. Masnick, "Take Another Look at Regional U.S. Growth," *Harvard Business Review*, March-April 1983: 83.

Figure 2
Employment Patterns in Muncie-Anderson Manufacturing Firms

Kokomo-Marion

Dilip Pendse

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For the first time in quite awhile, the clouds of uncertainty have disappeared from the economic skies over the Kokomo-Marion area, the industrial hub of mid-north Indiana. Not only has the economic climate improved, but there is also a good chance that the sunny economic climate will last a long time.

Strong evidence suggests that the improving economic climate will have a long-lasting impact on the area's economy. At the national level, there are indications that factory output, labor productivity, retail sales, and orders for durable goods are rising. More importantly, a turnaround in the sales of such "big-ticket" items as home furniture, appliances, and furnishing accessories will help improve the area's economic fortune.

At the local level many indicators are flashing the green light. First, local industries have stepped up worker recalls in the first five months of this year. Delco Electronics in Kokomo, for example, has called back 25 percent of its laid-off auto workers. Unemployment rates have dropped faster in all parts of mid-north Indiana than they have at the national and state levels because of worker recalls and the smaller labor force. For example, in April 1983, the number of unemployed workers at the national level was 11 percent higher than it was a year ago. At the state level it was 6 percent lower than a year ago. In contrast, the number of unemployed workers in April 1983 in Howard, Miami, and Tipton counties was 25 to 32 percent lower than a year ago. In Cass, Grant, Carroll, and Clinton counties it dropped between 6 and 21 percent during the same period.

Howard County's unemployment rate has dropped from 17.1 percent in April 1982 to 12.5 percent in April 1983. Similar dramatic improvements have also occurred in Miami, Cass, and Tipton counties.

The second indicator of economic progress is that several major industries have announced capital improvement and plant expansion plans. In Marion, the Fisher Body plant was chosen as one of GM's four tooling centers of the future. A $40 million expansion and modernization plan was begun in April. In Kokomo, Delco Electronics broke ground for a $204 million capital expansion plan, while Continental Steel Corporation embarked on an $18 million modernization plan. Indiana Bell's $3.4 million capital improvement program and a $4.5 million high-rise building for senior citizens in Kokomo are among other major construction programs underway in the area.

Kokomo has attracted four new high-tech businesses to the area, while a portion of the Owens-Illinois plant in Gas City was reopened in April. The reopening of the plant will provide jobs to 90 people.

The demand for home mortgage and home improvement loans in Kokomo rose sharply in the first quarter. Similarly, the number of building permits issued in Kokomo and Howard County during the first four months of this year registered a 36 percent increase over the same period a year ago. A noticeable change occurred in the number of permits issued for single-family dwellings. Four times as many such permits were issued during January through April 1983 as during the same period a year ago.

A recent survey of local manufacturers, retailers, and wholesalers in Kokomo showed more optimism in the business community's outlook on the near- and long-term economic trends than a year ago. Grocery shoppers in the area are also benefitting from lower inflation. During the first five months of this year, Kokomo's grocery price index rose at an annual rate of 2 percent before compounding.

Upbeat Forecast for 1983:3 and :4

Arrival of new industries, reopening of closed businesses, and capital improvement and expansion plans have not only assured security for existing jobs, but also enhanced the hopes for more jobs in the future. The unemployment rates will continue to fall in the second half of 1983. Home construction and improvement activities and home sales will improve. Retail sales will show healthy gains because of lower prices, higher personal disposable income, and consumers' overall confidence in the economic future. The grocery inflation rate will remain below 5 percent.

On the negative side, the outlook is not bright for those whose jobs have been lost permanently. These workers will have to be retrained and recycled into the economic mainstream.

On balance, this positive outlook is attributable to three developments: a faster-than-anticipated recovery in the housing, auto, retail, and durable-goods sectors of national economy; major expansion and plant modernization plans in the area; and the arrival of new high-tech industries to the area.

Lafayette

William C. Dunkelberg

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The psychology of the recovery seems fairly strong in the Lafayette area, although it will take some time to make itself felt on employment over the next six to twelve months. A survey of nineteen firms in the area indicated that fifteen expected *real* sales increases over the next twelve months; these expected increases averaged 17 percent. The remaining four

firms predicted no change in sales (see the accompanying **Table**). For ten of these firms, sales in the most recent twelve months were higher than in the previous twelve months. Four firms, all with 150 or more employees, reported sales declines. The firms with higher sales were predominantly the smaller ones. For all firms, both the average increase and decrease in sales in the past twelve months was 12 percent.

Optimism about future increases in real sales has not been translated into planned hiring. Only four firms (all smaller employers) planned to increase the size of their work force. An equal number of larger firms planned cuts in employment over the next twelve months. The average planned employment increase was five, while cuts were anticipated to average thirteen employees. Based on these data, employment cannot be expected to rebound quickly.

Three firms planned new construction, ten anticipated renovation and expansion of existing facilities, and nine planned to acquire new equipment and vehicles during the next twelve months. These data suggest much stronger capital expenditure activity than is expected for the economy as a whole. In support of these plans, seven firms reported higher earnings during the last twelve months, while only four reported earnings declines. And, as noted earlier, more than three-fourths of the firms expect real sales increases averaging 17 percent. This rate of expansion will utilize excess capacity left from the recession at a fast pace, should the expected sales materialize.

These data are based on a very small number of responding firms and represent only the first attempt to collect data systematically on business activity in the Greater Lafayette area. Although the data cannot be scientifically generalized to the entire business community, they do represent a reasonable distribution of firms in terms of size and provide some insight into the nature of the recovery in this community.

Asked to identify the major uncertainties for the firm in the next few months, nearly all respondents cited the deficit, the prospect of higher interest and inflation rates, and possible tax changes. Most of our business uncertainties today come from Washington, strong evidence of the heavy intrusion of government in the private sector.

In spite of these uncertainties, however, the recovery seems to be gaining ground in the Lafayette area.

Survey of 19 Firms in the Lafayette Area

		Sales Volume Last Twelve Months		*Real Sales Next Twelve Months*		*Capital Outlays*			*Hiring Plans*		*Profits—Last Twelve Months*	
Employment	*Number of Firms*	*Higher*	*Lower*	*Higher*	*Lower*	*New Structure*	*Renovate, Expand*	*Equipment, Vehicles*	*Increase*	*Decrease*	*Higher*	*Lower*
400+	3	2		2	1	1	2	3			3	
200-399	2		1	2			1	1				1
50-199	7	1	3	3	3		3	3	1		1	2
1-49	7	7	—	7	—	2	4	2	3	—	3	1
Total	19	10	4	14	4	3	10	9	4	0	7	4

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